Industrial Standardization

and Commercial Standards Monthly

War Standards for Military Radio

(See Article on Page 213)

September 1942

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And Commercial Standards Monthly

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RUTH E. MASON, Editor

Our Front Cover: War Standards are being prepared under ASA procedure for materials and parts used in military radio. In this picture, a staff sergeant of a bombardment squadron is serving as a radio operator on a huge YB-17 bomber. Official OWI Photo by Palmer.

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ASA

Reg. in U.S. Pat. Off.

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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Standards for Fire Protection

THE Office of Civilian Defense is calling special attention this year to the observance of the National Fire Protection Association's traditional Fire Prevention Week, October 4-10.

This will remind safety engineers in war plants of the important American Safety Standards for the prevention of fires and explosions which are now available from the American Standards Association. These include 11 standards for the prevention of dust explosions in various types of plants, a standard for fire-fighting equipment in metal mines, fire tests of building construction and materials, the National Electrical Code, and the National Electrical Safety Code. There is also a code for protection against lightning, and recommended practices for the use of explosives in bituminous coal mines and for rock dusting of mines to prevent explosions.

In addition, the Building Exits Code gives information as to the number and types of exits that are needed to protect workers in case of fire.

The National Fire Protection Association took a leading part in the development of these standards, as did the National Bureau of Standards, and the American Society for Testing Materials; and many other organizations have been active in the work.

Such standards as these are developed from the experience of industry in protecting property from fires, explosions, hazards from lightning, from defective wiring, etc. under practical working conditions. They contain a mine of information which any safety engineer can obtain at the cost of a few dollars.

War Standards For Military Radio

by S. K. Wolf
War Production Board

A PROJECT is now under way to set up emergency standards for military radio to help speed production of radio equipment for the Military Services, make replacements of parts easier, and conserve materials. This undertaking is being carried out through the cooperation of the Army, the Navy, the American Standards Association, the Radio Manufacturers Association, the Institute of Radio Engineers, and the War Production Board, together with the prime contractors and subcontractors.

Acting upon the request of the Radio and Radar Branch of the War Production Board, the American Standards Association called a conference on March 18 to consider the possibility of unifying the specifications for materials and parts in use by the Military Services and the prime contractors and subcontractors.

Mica Capacitors Are Tried First

In view of the complexity of the situation it was decided to select the field of Mica Capacitors as a trial assignment before undertaking work on the entire field. As a result of a series of meetings, a draft standard was prepared covering the entire range of Mica Capacitors from 5 to 100,000 micromicrofarads and covering all the various performance characteristics required by the Services. This has necessitated the unification of the requirements of the Services and of the prime contractors and parts manufacturers. Specifications have been developed for each size and grade of Capacitor which indicates the form of case, the capacitance, the tolerance, working voltage, and loss characteristics.

ASA Emergency Procedure Used

As a result of this trial it was decided to use the emergency procedure of the American Standards Association to organize for a thoroughgoing job on the whole problem of materials and parts. The work heads up in the American Standards Association War Committee on Radio, with S. K. Wolf of the War Production Board as chairman, and H. P. Westman of the ASA Sectional Committee on Radio (C16) as secretary.

The functions of the Emergency Committee are to:

- decide what jobs shall be done;
- outline the scope of each job;
- assign responsibility for each job to a Secretariat;
- keep the various jobs moving and obtain periodic progress reports;
- review all draft standards submitted to it from whatever source;
- circulate revised drafts for criticism;
- have the responsibility of securing approval of the military services;
- recommend formal approval of standards by ASA.

In order to carry out the work outlined for the Emergency Committee, subcommittees are being

Official OWI Photo by Palmer

Radio helps military headquarters keep in touch with operations in the field.

set up to consider the individual items on the program.

The following subcommittees are being organized:

1. Insulating materials
   (a) Steatite
   (b) Plastics
   (c) Others
2. Insulating Forms
   (a) Steatite
   (b) Plastics
   (c) Others
3. Capacitors—Fixed
   (a) Mica
   (b) Paper
   (c) Electrolytic
   (d) Ceramic
4. Capacitors—Variable
   (a) Receiver
   (b) Transmitter
   (c) Trimmer
5. Dynamotors and Similar Power Units
6. Crystals and Holders
7. Resistors—Fixed
   (a) Composition
   (b) Wire Wound
8. Resistors—Variable
   (a) Composition
   (b) Wire Wound
9. Transformers
   (a) Power
   (b) Audio Frequency
   (c) Radio Frequency
10. Tube Sockets
    (a) Receiving
    (b) Transmitting
    (c) Cathode Ray
11. Connectors
    (a) Telephone Plugs and Jacks
    (b) Multicontact Plugs and Receptacles
12. Dry Batteries
    (a) Single Cell
    (b) Multicell
13. Vibrator Power Supplies

Each subcommittee is directly responsible to the War Committee on Radio. The personnel of subcommittees is not limited to that of the War Committee on Radio. It is drawn chiefly from the armed forces and from prime contractors and subcontractors. In most cases small task committees will prepare draft standards which will then be distributed for criticism, and after judicious revision will be placed before the War Committee on Radio for final action.

Secretarial services for these various subcommittees will be provided by the American Standards Association.

Members of the ASA War Committee on Radio are:

R. P. Bennett, Bendix Radio Corporation
H. A. Bonfig, Radio Corporation of America
R. F. Cunningham, Captain, U. S. Army, Signal Corps
J. B. Dow, Commander, USN, Bureau of Ships (A. B. Chamberlain, Lt. Comdr., USNR, Bureau of Ships, *Alternate*)
L. A. DuBridge, National Defense Research Council (K. V. Curtis, National Defense Research Council, *Alternate*)
J. J. Farrell, General Electric Company
A. N. Goldsmith, Institute of Radio Engineers
D. G. Little, Westinghouse Electric and Manufacturing Company
J. D. O'Connell, Colonel, U.S. Army, Signal Corps (Theodore Bishoff, Captain, U. S. Army, Signal Corps, *Alternate*)
T. C. Rives, Colonel, U. S. Army, Signal Corps
H. N. Willets, Western Electric Company

It should be emphasized that this job is a revision and unification of existing standards now in use by the Army, the Navy, the Radio Manufacturers Association, the Institute of Radio Engineers, and individual companies, with such additions and corrections as are necessary to make a consistent and thoroughly workable series of standard parts and material requirements. For example, in the work on Capacitors it was found possible to eliminate many items now in use and varying only insignificantly from each other, while at the same time a few types were added in order to make the series sufficiently complete for all practical requirements.

ASA Approves Standard for Gloves To Protect Electrical Workers

A standard which for many years has given protection to electrical workers by specifying the properties of the rubber gloves they wear has been given the status of American Standard by the American Standards Association. The new edition of the standard, Specifications for Electrical Gloves (C59.12-1942; ASTM D 120-40), limits the voltage stress through the wall of the glove to 3000 volts.

The gloves must be made by a seamless process, and must be able to withstand strenuous voltage and dielectric strength tests without leakage.

Specifications for tensile strength and elongation, and other physical properties, are included to assure the satisfactory performance of the gloves.

Methods of testing for thickness measurements, electrical tests, dielectric strength, tensile strength, elongation and set, and accelerated aging are included.

Approval by the American Standards Association assures that the standard has been accepted as satisfactory for its purpose by all important national groups concerned.

No August Issue

The American Standards Association regrets that due to circumstances beyond its control it has been necessary to omit the August issue of INDUSTRIAL STANDARDIZATION. The current, September, issue becomes Number 8 of Volume 13, and as a result there will be 11 numbers only in this volume.

OPA Uses Standards As Operating Controls

Organizes Standards Division with authority to deal with labeling and to supervise tests for enforcement of standards

REORGANIZATION of the standardization work in the Office of Price Administration has given the standards operating unit the rank of a full Division of the OPA with corresponding administrative authority. The work was formerly in a subsidiary position in a section of the Consumer Division. Organization of the new Division makes the standardization program an integral part of the operation of the Office of Price Administration.

The new Division will provide the OPA operating divisions with the technical assistance needed for developing standards to be included in all OPA regulations where quality of product is a factor. Such standards will define the quality which must be met if the commodity or product is to command the maximum price permitted in the OPA regulations. The Standards Division has also been given authority to deal with labeling of goods in accordance with the standards, and has been given supervision over all testing to determine compliance with and enforcement of the standards. Such testing is being used in the case of the alleged false labeling of beef and veal (see page 216).

In addition to standards as a basis for price regulations the new division will develop standards for rationed commodities so that consumers will obtain fair quality as well as quantity when buying rationed goods. It is also expected to develop methods of determining "fairly equivalent serviceability" for use in pricing "similar" commodities.

Will Define Services Due Tenants

The activities of the division will even extend to the problem of rent, where it will define the nature and extent of facilities and services which tenants must receive in return for their rentals in areas under OPA regulation.

Dexter M. Keezer, Deputy Administrator in charge of general services, will act as director of the Standards Division, and W. S. MacLeod as chief of technical operations. Mr. MacLeod was formerly in charge of standardization for the Standard Oil Company of New Jersey. Dickson Reck will be Mr. MacLeod's senior technical associate. Mr. Reck has been with OPA and its predecessors for two years. He formerly was assistant to the general manager of the Square D Company, Detroit, and later a lecturer at the Wharton School of the University of Pennsylvania.

It is planned that technicians of th eStandards Division staff will be available to every OPA operating branch and will develop such provisions for quality, quality definitions, labeling, or other standards devices as may be required to accomplish the purposes of any regulation—price, rationing, or rent. Standards Division men, according to the OPA announcement of the new division, will be the primary channel of contact between OPA and the War Production Board and other government agencies on all problems of product standards and simplification.

War Changes Make Standards Necessary

"Under the stress of war conditions, the specifications of innumerable articles are changing," declared Leon Henderson in a statement accompanying his announcement of the new division. "Many common materials are scarce and getting scarcer; many have already disappeared from civilian life and many are on the way out. Substitutions are becoming commonplace. Wood, glass, and plastics are replacing steel, aluminum, copper, and brass. . . . In the food field, war has compelled changes in packaging. Glass has replaced cans in a number of things and the armed forces are using whole crops of some foods. Shortages are inducing concealed quality changes and, in some cases, misbranding and upgrading.

"For the ordinary civilian, this situation makes more difficult than ever the problem of 'getting your money's worth'. Price control can prevent plainly visible increases on the price tags, but of itself cannot protect the shopper against debasement of quality, use of inferior materials, and 'skimping' on quantity, measurements, or workmanship. Commercial buyers are confronted with the same difficulties.

"Congress recognized these dangers in the Emergency Price Control Act of 1942, which, in addition to vesting in OPA the authority to set maximum prices, gave it power to regulate and prohibit 'practices relating to form and quality'. The newly created Standards Division has been

set up to provide the operating divisions with the technical assistance required to carry this directive into action and to protect the buyer of price-controlled or rationed articles, and tenants in areas under the OPA regulation, against price increases that are not spelled out on the price tag or rent receipt.

"One primary purpose of both rationing and price control—to make the most effective possible wartime use of our available resources—can also be effectively served by the elimination of waste in the use of available supplies, and simplification in design and distribution to secure the maximum of useful product from limited supplies. Hence, the OPA also recognizes its obligation to collaborate in the effective development of programs of conservation and simplification.

"In carrying out these latter obligations, parts of the program will be implemented through the War Production Board and other agencies responsible for specific quality and production controls. The remainder will be carried out through the joint efforts of OPA operating departments and the Standards Division."

In carrying out its program the Standards Division plans to make the fullest use of the work being done by the National Bureau of Standards, the Department of Agriculture, the War Production Board, and other government agencies, as well as of the American Standards Association and other qualified standardizing groups outside the government.

ASA Will Work on OPA Projects

Work for this Division will be an important part of the program being carried out by the American Standards Association under the contract entered into by the ASA with the Office of Emergency Management on behalf of WPB and OPA. Under this contract the ASA is to be reimbursed by the Government for the actual cost of the work undertaken specifically for WPB and OPA. It is limited to $90,000 in any one fiscal year. At present the ASA is working on two projects for the OPA under this contract, one on sizes for children's garments and patterns and the other on safety work shoes. The ASA is also working on projects for the Simplification Branch and the Radar Branch of the War Production Board.

New Welding Standards Issued by Society

The American Welding Society recently published two welding standards, *Standard Methods for Mechanical Testing of Welds* and *Definitions of Welding Terms and Master Chart of Welding Processes*. Both of these standards were prepared by technical committees of the Society and are revisions of earlier bulletins of the same title.

Standard Methods for Mechanical Testing of Welds describes in detail the principal mechanical tests applied to welds, including tests for density, soundness, tensile strength, shearing strength and ductility (bend tests). The booklet includes sketches of the specimens and descriptions of the methods of testing and evaluating the results. Some of the tests apply to the weld metal alone; others apply to butt-welded joints and fillet-welded joints. In addition there is a section on etching reagents and procedures for etching.

Definitions of Welding Terms and Master Chart of Welding Processes gives the standard definitions of welding terms adopted by the American Welding Society. The terms are grouped under appropriate headings and subheadings so that closely related terms appear together and their relationships may be more readily understood. In addition the booklet includes an index in which all terms are listed alphabetically. Fifty-one illustrations assist in making the various definitions clear. The booklet also includes a chart showing the various subdivisions of the principal welding processes, namely: forge welding, resistance welding, arc welding, gas welding, thermit welding and brazing.

Both of these standards are published in bulletin form, with a heavy paper cover, and are available at 40 cents a single copy from the American Welding Society, 33 West 39th Street, New York City.

OPA Drives Against "Upgrading" of Beef

The Office of Price Administration announced September 3 that it had opened a nationwide drive against violators of price ceilings on beef and veal in 18 United States cities, as a part of its intensified work on standards (p 215). "Upgrading" is the basis for most of these actions, the OPA announces. The OPA price order on beef and veal contained standard grades, and provided that all carcasses and wholesale cuts of meat must be accurately stamped and must not be sold at prices in excess of the legally established maximum prices for the particular grades. "Up-grading" consists in selling a lower grade of a commodity at a price set for a higher grade.

More than 100 United States meat packers and wholesale distributors are involved in the OPA action, which is the outcome of a nationwide investigation by OPA inspectors working in cooperation with inspectors from the Department of Agriculture.

The OPA is requesting court injunctions to compel compliance with the price regulations.

Facts— For An Effective Consumer Standards Program

by William B. Floyd

Manager, Technical Departments, Sears, Roebuck and Company

IN the past few years it has become evident that standards for consumer goods face real problems. On the surface many of these look like the old, familiar problem of conflicting interests and consequent unwillingness to agree on any real standard. There is, of course, no glossing over the fact that widespread standards for consumer goods will hit some vested interests in this country and hit them hard, but the fundamental problem undoubtedly is not so much one of conflict between persons and groups as it is one of the power of preconceived ideas coupled with a lack of facts.

Everyone who has had experience in formulating standards and in securing their adoption knows that the job cannot be done without a great amount of information—without *facts*. The facts serve a two-fold purpose: First, they are essential to writing the standard itself. Second, and often of even greater importance, they furnish the non-controversial basis for mutual agreement.

In the industrial field, a successful program of standardization has been actively under way for many years. Company standards, industry standards, inter-industry standards, and even international agreements have been concluded with benefit to all concerned. Facts have been the basis for all such agreements—facts obtained through painstaking work on the part of technicians, testing laboratories, research organizations, and through cooperation between industrial buyers and sellers.

There are not many people, however selfish they may be accused of being, who will place their own personal interest, or the interest of the group they represent, above the "common good", once the facts force them to face the issue.

Few Facts in Consumer Field

In the consumer field, on the other hand, although everyone seems to think he knows exactly what merchandise the public wants—or, at least, what the public "should have"—few actual facts are available. It is true that since all of us are consumers, we do have some vague ideas of what we want. It is also true that manufacturers and retailers know what the public is taking at the moment. Many of them probably remember some very sad sales experiences when they offered merchandise that the public refused to take.

No one, however, has ever studied the consumer's wants in accurate detail. At best we have only impressions. Nor do manufacturers and retailers know much more than what, in the past, has sold and what, in the past, has failed to sell. Certainly, they do not know what *might* sell, and what might give even greater satisfaction to customers. An illustration of how easy it is to miss the requirements of the field happened a short time ago in our company. Our primary consideration—in fact, almost our sole consideration—in designing and testing coal-burning furnaces had always been efficiency. However, when some young combustion engineers were hired, they were told, before they learned all of the things that we might be doing wrong, to spend a few weeks in the field tabulating from service files and from first-hand visits to actual installations the "important characteristics" of coal-burning furnaces. When their reports were turned in, not one of them had mentioned efficiency as a primary consideration. Some users had complained of high fuel bills, but as the investigation showed, the high fuel bills were largely due to poor firing. It was quite apparent, in the field, that many of the worst furnaces, well fired, were giving low fuel consumptions, while some of the best furnaces, poorly fired, were consuming excessive fuel.

But these young men did come back with a long list of considerations, which had been completely overlooked by the more "experienced" engineers. Typical among them were ease of ash removal; fire-door hinges that do not break or sag; grates high enough not to burn-out with a reasonable accumulation of ash under them.

Even where the desirable characteristics of a piece of merchandise are well known, there is usually a major problem in determining their relative importance. Jumping from furnaces to bath towels, everyone would instantly recognize that water absorbency and wear are two important characteristics. Either characteristic can be greatly enhanced at the expense of the other, the cost remaining the same. But who knows, quantitatively, where or in what range the optimum balance lies?

Any effort to evaluate consumer needs also runs into the problem of types and price lines. Overalls are overalls, but a painter's requirements in an overall are not the same as a machinist's. Different types of merchandise have to be made for different types of use. Nor can the same requirements hold for a 98-cent overall as for a $2.00 overall. There are minimum requirements, below which the merchandise is of virtually no use. Above these minimum requirements, there are higher levels of usefulness, convenience, durability, and appearance—unfortunately accompanied by higher prices—which are necessary to meet more stringent needs.

Characteristics Should Be "Quantitative"

Ideally, merchandise characteristics, by type and by price-line, should be quantitative. The required life of a mechanical item, for example, should be expressed in hours continuous running or in terms of so many cycles under a definite test procedure. Strength should be expressed in the number of pounds which the items should withstand under tension or compression, as the case may be. Function should be expressed in such terms as the amount of dirt a vacuum cleaner will pick up or the amount of water a towel will absorb. Where quantitative requirements are very difficult to establish, it would be a tremendous aid in establishing standards to merely list the desirable characteristics, and to put them in the order of their importance.

Everyone would agree that if we did *know*, quantitatively, what consumers' requirements are, or if we did know what characteristics are desirable in actual use, we would be a long way on the road toward "standards for everything" in the consumer field.

Machinery for Consumer Goods Standards Results from Six Years' Work by ASA

It has been about six years now since the American Standards Association first became actively interested in standards for consumer goods. The six years have not been wasted. The field was new to the ASA. Policies had to be established. Contacts had to be made with interested groups, and the degree and objectivity of their interest had to become known. Committees and the other machinery for establishing consumer goods standards had to be set up.

The most important stumbling block to more rapid progress has been lack of facts. Whenever a new subject for standardization is taken up, I believe the very first step should be to lay aside all our pre-conceived ideas as to what consumer needs are—no matter how much we think we know about it—and make a complete study to determine exactly what the consumer needs are.

Who Will Do the Work?

The question remains: who is going to do the vast amount of detailed work which is necessary in order to secure these basic facts which alone can combat preconceived ideas and closed minds,

The ASA Consumer Standards Program

The list of *completed* standards in the consumer field is brief, compared with the literally thousands of items on which consumers would like to see standards. There are to date about 30 standards approved by the American Standards Association for articles sold over the counter, plus a much larger number of standards intended for use in building maintenance and operation.

There are American Standards for all the gas appliances commonly found in a well equipped home. A start has been made in the field of electrical equipment—two standards completed so far. There are nine completed standards in the photographic field, including the new photographic exposure guide which was developed for the United States Navy but has since been released for civilian use. There are five textile standards; three for jewelry. A start has been made in the field of standardizing sizes for children's garments with the Standard Body Sizes for Boys' Garments. There are two standards in the automotive field, one for safety glass, and one covering inspection requirements for maintaining a car in good condition. There are standards for adequate lighting of schools and other buildings, for sanitary drinking fountains, for operation of elevators, etc.

But all this is a mere scratching of the surface. Much more needs to be done, as Mr. Floyd points out in this article.

and give the information needed before agreement on actual standards can be arrived at.

As a possible reply to that question, I should like to suggest the possibility of securing the combined aid of the home economics schools and of consumer members of such organizations as the American Association of University Women, the League of Women Voters, the American Home Economics Association, and perhaps other similar groups.

Judging from conversations and from the theses which are published, it is not always easy to select suitable work for advanced degrees in home economics. Home Economics being an applied science, it is desirable that problems be close to the realities of homemaking. It strikes me that nothing could be closer to these realities than a study of consumer goods in actual use. At the same time, such a study would bring into play an even greater-than-usual number of the scientific techniques which are studied in college.

Would Give Practical Experience

In every field study, the all-important sampling technique would be involved, giving the graduate student practical experience with mathematical statistics. The studies as a whole would draw upon basic knowledge from almost every course in the college curriculum. A home economics student minoring in organic chemistry would be well equipped to study the requirements of drug or cosmetic items. A home economics student minoring in physics should be competent to study any of the household appliances.

Use studies and the formulation of objective requirements for consumer goods also offer some interesting possibilities for joint research. For example, both the Home Economics Division and the Engineering Division would learn much that they had not known from a *joint* project on furnaces in actual home use!

While home economics students are mentioned as the primary candidates for the work we want done, students from other schools are by no means excluded. Scientific determination of the requirements of the vast number of items used on a farm—in the fields and around the barns—is worthy of the best efforts of any agricultural college.

Must Test Merchandise

While the establishment of consumer needs usually necessitates, sooner or later, going out into the field where the merchandise is used, there are other facts which cannot be overlooked. The first step is certainly that of examining and testing and becoming thoroughly familiar with the merchandise which is being sold. Then, published sales figures can be used to give an indication of consumers' preferences—at least their preferences among what is offered for sale. The men who install and service mechanical appliances know of many things that are "wrong". It is often very worthwhile to talk with some of them. There are legal requirements, and the practices of the industry, to be reviewed.

Finally, there is a somewhat intangible factor but one of great importance: what is technologically possible. It would be one thing to say, from field studies, that consumers "need a $10.00 suit of clothes, well tailored, and capable of withstanding five years of daily wear." This may be a worthy ideal, but not one which is technologically possible today. On the other hand, field studies almost always bring out needs that are not being supplied but which *can* be supplied with a litttle engineering ingenuity. Competent engineers—men who know the materials and processes involved and who have imagination—have to be in the picture to pass on these questions of technological feasibility.

It would be necessary to enlist the aid of members of consumer organizations to make their homes the "objects of study." Consumers will be willing. Certainly they could make no greater contribution to their own welfare. Assistance on such projects would offer a tangible expression to their often expressed interest in bettering the merchandise they buy.

Speaking from experience, it probably is not practical to ask consumers, however intelligent or interested they may be, to keep records. Better than any records which consumers might

Consumer Standards in the War Effort

By request of WPB and other governmental agencies special war-time standards have been developed for gas ranges, gas fired water heaters, etc. The uncompleted work of at least two more ASA committees has been utilized by the Government: in the recent OPA order on sheeting which tied price to quality through standards; in the work that is being undertaken on color fastness. Because of the importance of standards in the war effort (1) to simplify the production problem, (2) to conserve materials, (3) to protect the consumer from hidden quality cuts in price controlled products, the Federal Government has recently negotiated a contract with the American Standards Association which will lead to additional emergency jobs in addition to those already on the books.

keep, are first hand observations of skilled observers—the students who undertake the research project. For example, in extensive practical tests on women's rayon slip fabrics, which were made at the instigation of the duPont Company, laboratory technicians collected and examined the slips at regular intervals. The wearers were asked to keep some record of when the slips were worn and when they were washed, but even this information could have been secured with sufficient accuracy in conversation with the wearers at the time the slips were picked up for periodic examination.

Of course, one great difficulty of studies based on actual, normal use is the often considerable amount of time which the studies take before final conclusions can be reached. The standardization of consumer goods is going to take a long time, at best. It will undoubtedly take a shorter time if use-studies are made, even if the studies themselves are rather lenthy. The important thing is to get a great number of studies under way simultaneously and at a very early date, so that data will become available as fast as standardizing committees can utilize it. It is also to be pointed out that *preliminary* data are often indicative, and far better than nothing as a basis for standards.

Standards are not immutable. If final data show that the standard as originally established is not "right," a revision can always be made. For that matter, no one study of consumer needs is final. Such studies should be checked by other observers in other localities. They should be repeated as the years go on, because even *needs* change with changing living conditions and changing tastes.

Unfortunately, many studies of consumer needs cannot be undertaken in war time, partly because the effort can better be expended on other activities and partly because normal merchandise is not available for observation. The preliminary thinking and talking can be done now. The day the war is over and normal merchandise again starts to flow into the hands of consumers, all of the machinery should be established for immediately launching scientific studies of consumers' needs on all of the more important articles of everyday use.

The promotion and coordination of these studies could well be one of the greatest of the many basic services which the ASA has rendered, and might well be the greatest contribution made thus far to the much discussed but little acted upon "consumer goods problem." Probably no organization other than the ASA has the necessary prestige in professional groups, in manufacturing groups, and in consumer groups to foster as sweeping a project as "the scientific study of consumer needs."

Photographic Exposure Computer Receives Nation-wide Attention

THE new Photographic Exposure Computer, which a subcommittee of the ASA committee on photography recently developed for the United States Navy, is arousing much interest. Window displays of the civilian edition, like the one illustrated here, are appearing in more than 100 stores all over the country. Several thousand copies of the civilian edition are already in the hands of camera enthusiasts. This does not count the very considerable number of the military edition being used by the army, navy, and air force.

Described in National Magazines

The Computer has already been described and discussed in the editorial columns of *Newsweek*, *Aviation*, the *Aero Digest*, the *Scientific American*, the New York *Sun* and the New York *World-Telegram*, and many of the photographic magazines.

The civilian edition is printed from the same plates as the military edition, but because of priorities a different grade of paper is used.

The Computer represents a war-time contribution unselfishly made by the representatives of an entire industry in order to aid in the conduct of the war.

Worsinger Photo

The Computer in a window display at Willoughby's, New York.

Manganese Standard Protects Health of War Workers

THE fight to protect industrial workers of the nation from health and accident hazards has moved another step ahead with approval of the new American War Standard, Allowable Concentration of Manganese. This standard sets up minimum rules for the protection of workers who are exposed to the dust and fumes of manganese.

Manganese is a hard, grey, brittle metal found as the dioxide in an ore called pyrolusite. Its present importance lies in the fact that 14 pounds of it are necessary for the production of every long ton of steel that goes into our war production. In addition to use in steel, it is an important constituent of dry batteries, it is often used as a drier in paints, and small amounts of it go into disinfectants.

Previous to the war the United States imported almost all of its manganese. For example, in 1939 the United States imported more than 500,000 tons of manganese ore as against 30,000 tons produced domestically. Now that our former sources of supply have been closed to us by the war, at the same time that our consumption of manganese has increased, we are preparing to produce in this country more than 600,000 tons a year from low-grade ores. Present estimate is that we will consume in 1942 just about twice as much manganese as we used in 1939.

Most recent estimate on the number of persons working with manganese in such a way as to expose them to hazards of manganese poisoning is 23,000, but this estimate may be way off the present figures.

Crushing Causes Health Hazards

Health hazard to workers comes largely in the plants where the ore is crushed. After crushing, the fine powder is bagged in paper sacks; and both crushing and bagging are very dusty operations.

Manganese poisoning is a chronic disease—its symptoms, muscular stiffness and an inability to make muscles work together. Those afflicted fall when they walk backwards. They may have difficulty in talking. Twitching of the muscles of the face is another indication of the disease. There also is complaint of drowsiness, weakness, and muscular cramps. Once the disease is well established there seems to be very little hope of cure.

The importance to industry, not only from the humanitarian but also the economic viewpoint, of adequately protecting workers from this health hazard may be judged from a case in New Jersey in which the plaintiff was given a high award for illness due to inhaling manganese dust.

The standard for the permissible concentration of Manganese is the second to be completed in a whole series of standards to protect workers from health hazards arising in connection with the war industries. Developed by a special committee of health experts in the government and in industry, it sets 60 milligrams of manganese per 10 cubic meters of air as the maximum allowable concentration of manganese dust or fumes in any place where employees are working regularly. The standard also recommends a sampling procedure and methods of analyzing samples.

This and the other standards which have been and are being developed to set up safe limits for toxic substances are all part of a much larger program to develop standards in the industrial health field, which was started before the war and is still continuing on a peace-time basis.

Industry, government, insurance, and safety organizations are all pooling their experience and

The development of industrial health standards is just one phase of the much larger safety program of the American Standards Association, which has played a real part in the reduction of industrial accidents during the past twenty years. More than 60 American Safety Standards have been completed to date and there are many more in the course of development.

These standards today form the backbone of state industrial regulations wherever such regulations exist.

Insurance companies use them as a basis for advice to their assured.

They provide industry itself with good common-sense rules for cutting down accidents.

Employers, employees, government groups, insurance companies, and safety organizations are all pooling their experience and knowledge in the development and constant revision of these safety standards.

knowledge in the development of standards to safeguard the health of industrial workers. Among the standards now being developed are those on Arsenic, Xylol, Nitrous Gases, Chromic Acid and Chromates, and Mercury. Subcommittees are studying such substances as Carbon Tetrachloride, Hydrofluoric Acid, Lead, Toluene, Trichlor Ethylene, Tetrachlor Ethylene, Formaldehyde, and Diethyl Ether in order to determine the desirability of developing standard allowable concentrations. An additional subcommittee is developing a report on Silica. After the emergency is over those standards approved as war standards will go through the regular procedure of the American Standards Association for any necessary revision before approval as American Standards. Meanwhile their use will be protecting the health of employees vitally needed in the war effort.

Dearborn Will Direct Program of National Safety Council

NED H. DEARBORN has been named executive vice-president and managing director of the National Safety Council, succeeding W. H. Cameron. Mr. Cameron, who is retiring after almost 30 years as managing director, saw the Council grow from an organization of two staff members to its present prominent place with a headquarters' staff of 140 persons.

Mr. Dearborn is leaving his position as Dean of the Division of General Education of New York University to direct the greatly expanded war-time program now being conducted by the Council.

Council Important in ASA Development

The National Safety Council has an unusually prominent place in the activities and the history of the American Standards Association. It has the unique distinction of having been responsible for the reorganization which changed the American Engineering Standards Committee (now the ASA) from a coordinating committee for the national engineering societies to a national standards organization representing industry, government, and the technical societies.

This achievement resulted from a survey conducted by the National Safety Council in 1918 which showed that many conflicting rules, regulations, and safe practice recommendations had been established by state departments of labor and industrial accident commissions, insurance groups, and trade associations. The Council found that state departmets of labor and industrial accident commissions in the principal industrial states were setting up rules and regulations each in its own way and with no contact with each other. The insurance groups, through the compensation rating schedule, also had been establishing specific requirements for the removal of accident hazards, which in many cases conflicted with the state governmental requirements. In addition, trade associations through safety committees had made specific recommendations, and individual companies as a result had put into effect company safety rules. Some of the departments of the federal government, while not having regulatory power, did have influence in the safety field, and because of that influence had also established safety recommendations. The survey showed very little correlation or coordination in connection with these various safety requirements and recommendations.

As a result of this survey, the National Safety Council set out to bring together all the groups concerned with the problem of industrial safety to coordinate their requirements and iron out differences of opinion. In this program it had the very valuable assistance of the National Bureau of Standards.

Through these efforts the American Engineering Standards Committee (now the American Standards Association) which at that time had in its membership only representatives of five national engineering societies was reorganized to include also representatives of industrial and governmental groups. As a result of this reorganization the American Standards Association was given the responsibility for undertaking a broad program of uniform safety standards which could be used by all groups in carrying forward their accident prevention work.

Continues Leading Role

Since the start of that safety program, some 80 safety standards in many different fields have been developed under ASA procedure and have been approved by the American Standards Association.

In all of this, the National Safety Council has continued to play a leading role. It is the sponsor organization for 20 of the technical projects of the ASA, and as a Member-Body of the ASA is one of the policy-making organizations and has a voice in all ASA decisions on initiation and approval of standards. Through its representation on the Safety Code Correlating Committee, the Highway Traffic Standards Committee, and the Mining Standardization Correlating Committee, it also has a part in directing the ASA standardization program in these fields.

Courtesy American Gas Association Testing Laboratories

New War Standards for Gas Water Heaters

(Above, water heaters are being inspected to check compliance with standards.)

More Gas Appliance Standards Are Available

by R. M. Conner[1]

Secretary, ASA Sectional Committee for Approval and Installation Requirements for Gas Burning Appliances

SPONSORED by the gas industry to aid the war effort through conservation of critical materials, American War Standard Approval Requirements for Gas Water Heaters, Z21.10-WS 1942, are now available. They constitute the second set of war standards covering gas appliances, following closely those covering domestic gas ranges. They were prepared by the Special Subcommittee on Emergency Modification of Requirements, a subgroup of ASA Sectional Committee Z21, AGA Approval Requirements Committee. After approval by the sectional committee the new war standards were adopted by the American Standards Association. They will remain in effect for the duration of the war.

In their preparation, full consideration was given Limitation Order L-42, issued by the War Production Board, which establishes sizes of direct-fired gas storage water heaters, and prohibits metal jackets, brass draw-off cocks, and models requiring more than one heat flue. Since other

[1] Director, American Gas Association Testing Laboratories.

types of heaters may also be manufactured, it was not practical to direct the new requirements toward a single type as was the case with emergency standards for domestic gas ranges. Consequently their terms are sufficiently comprehensive to allow approval of all ordinary types.

Major changes presented by the new war standards over current American Standard Approval Requirements for Gas Water Heaters are in constructional features. For example, non-metallic, non-combustible materials may be used for parts not in direct contact with flue gases, thus permitting use of acceptable substitutes for many sheet-metal parts normally employed. Other modifications are directed toward conservation of critical materials. All construction, however, is required to comply with reasonable concepts of durability and substantiality, thus providing assurances on features of major importance to all consumers.

Safety and Efficiency Requirements Unchanged

All requirements covering safety and efficiency have been retained unchanged. This fact cannot be too strongly emphasized in view of the importance of safety to all users of gas fuel and the need of efficient performance. Only one minor change was made affecting performance. In view of the fact that many localities are not supplied with high water pressure, and consequently do not require storage vessels capable of withstanding a 300 lb per sq in. hydrostatic test, the section on storage vessels of assembled units was modified to require compliance with a minimum test pressure of 250 rather than 300 lb per sq in. However, if the tanks are designed and marked for pressures higher than 250 lb per sq in., they will be tested for leakage and permanent deformation at the pressure shown on the heater's nameplate.

Approval Seal Refers to "War Standard"

All gas appliances complying with American Standard Approval Requirements are identified by their mandatory display of the American Gas Association's Laboratories Approval Seal. Water heaters complying with the new war standards are also required to display this trade-marked emblem. In order, however, to clearly indicate that they have been constructed under war emergency conditions they are further required to bear the statement: "Approved under War Emergency Requirements." This must appear in permanent form adjacent to the Seal.

Revised approval requirements for refrigerators using gas fuel have been approved by the American Standards Association and will become effective January 1, 1943. Provisions of current standards have been expanded to keep pace with latest developments in appliance manufacturing and gas utilization. New sections on construction appearing for the first time include gas supply lines and water connections, bolts and screws, gas pressure regulators, and electrical equipment. Compliance with applicable national standards is required for the majority of accessories used on refrigerators.

Test Gases and Pressures Changed

Among revisions in performance features are those covering test gases and test pressures. Use of 800 Btu per cu ft mixed gas and increase in normal adjustment test pressure from 3.5 to 6.0 in. equivalent water column is in line with similar provisions included in latest requirements covering other classes of gas appliances. Exhaustive tests for automatic pilots are prescribed to insure satisfactory operation and long life of these most important devices. A section covering test procedures with liquefied petroleum gases has replaced a former section which covered only propane gas. This change is sufficiently comprehensive to permit approval of refrigerators for operation with butane, propane, or mixtures of these two gases, when tests are made only with butane gas.

Revised American Standard Listing Requirements for Gas Valves will also become effective January 1, 1943. Formerly known as Listing Requirements for Gas Burner Valves, they covered types usually employed to control gas flow to a single burner. The new test, in addition to covering valves of this type, has been expanded to include pilot adjustment and pilot shut-off valves, and manual main control valves, used to control the gas supply to an appliance. Consequently the title has been changed to indicate this enlarged scope. Strength tests have been extended to cover the various types of valves as have the life tests or continued operation tests. Due to infrequent use in service, pilot shut-off and pilot adjustment valves are required to meet only 2000 cycles of operation, 1000 at room temperature and 1000 at 300 F. As manual main gas-control valves are seldom located near the heat zone of an appliance, and are seldom used, they need withstand only 1000 cycles at room temperature. As in the case of gas burner valves, all pilot adjustment, pilot shut-off, and manual main control valves must show no signs of leakage before and after continued operation, and the torque required to open or close them must be within certain limits.

All Types of Valves May Be Certified

With these requirements available it will be possible to employ certified valves of all types on approved gas appliances. When it is considered that more than 95 per cent of all gas appliances offered for sale in the United States and Canada display the Laboratories Approval Seal as evidence of compliance with American Standards, all of which employ one or more types of gas valves in their assembly, it will be

readily evident that certification of these valves is a step toward providing trouble-free life and ease of servicing gas appliances.

In view of the greatly increased use of gas for wartime industrial processes, adoption of American Standard Requirements for Installation of Gas Burning Equipment in Power Boilers is particularly significant. They were formulated by a subcommittee of ASA Sectional Committee Z21. Its membership includes representatives of the Associated Factory Mutual Fire Insurance Companies, The Travelers Insurance Company, Underwriters' Laboratories, Inc., National Board of Boiler and Pressure Vessel Inspectors, and American Society of Mechanical Engineers, in addition to manufacturers of such equipment, and gas company representatives. Although requirements dealing with power boilers had previously been developed by other organizations, it was believed that they did not give all the coverage desirable from the standpoint of proper utilization of gas where existing installations were converted to its use from other fuels. These requirements were therefore prepared to cover only such conversions, since it was believed that power boilers designed exclusively for use with gas, which are generally constructed to meet detailed specifications, offered no special problem. The new standards include provisions for ventilation of the boiler room, accessibility for cleaning and inspection, and installation of flues and flue connections. In addition detailed information on installation of burners and controls together with gas piping and meters is presented. One section is devoted specifically to inspections and tests of all converted units.

The four new Gas-Burning Appliance standards approved by the American Standards Association are now available as follows:

American War Standard Approval Requirements for Gas Water Heaters (Z21.10WS-1942) $1.00

Listing Requirements for Gas Valves (Z21.15-1942) 50¢

Approval Requirements for Refrigerators Using Gas Fuel (Z21.19-1942) $1.00

Approval Requirements for Installation of Gas-Burning Equipment in Power Boilers (Z21.33-1942) 50¢

These standards may be obtained from the American Standards Association, 29 West 39th Street, New York City.

NBS Report Gives New Data On Soldered-Joint Fittings

BMS83, Building Materials and Structures, just published by the National Bureau of Standards, presents data on the strength of sleeve joints in copper tubing made with various lead-base solders. This is information which ASA Sectional Committee A40 indicated some two years would be essential before a more complete edition of the American Standard on soldered-joint fittings could be prepared.

The American Standard for Soldered-Joint Fittings (A40.3-1941) carried an explanatory note by the committee discussing research on various solders and explaining that the pressure and temperature ratings in the American Standard were limited by the properties of the 50-50 tin-lead solder used to make the joints. The committee indicated at that time that as soon as the National Bureau of Standards completed its research on solders known to have a greater resistance to corrosion than the 50-50 tin-lead solder, modifications in the American Standard could be expected adding new data and appropriate rating tables.

The properties of the 50-50 tin-lead solder given in the 1940 edition of the American Standard are those assigned to it in a comprehensive report issued by the National Bureau of Standards in 1940, BMS58.

Copies of these two reports, BMS83 "Strength of Sleeve Joints in Copper Tubing Made with Various Lead-Base Solders" and BMS58 "Strength of Soft-Soldered Joints in Copper Tubing", are available from the Superintendent of Documents, Washington, D. C. at 10 cents each.

National Bureau of Standards Suggests Model Specification

To help in preparing specifications for building construction, a report has just been published by the National Bureau of Standards in the Building Materials and Structures series. The report, known as BMS87, recommends a method which is expected, under proper supervision, to condense specifications, bring about important economies, and increase efficiency. It was prepared by a committee representing various Federal agencies which has just completed a study of the methods used in writing specifications. Three examples show how the new method recommended by the committee works. These examples include a model basic specification illustrating the procedure outlined; a typical contemporary specification; and this typical specification rewritten in accordance with the new method.

Copies of BMS87 are available from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 10 cents each.

Standards Issued by Associations and Government

(See "ASA Standards Activities", page 238, for new American Standards and progress on ASA projects)

For the information of ASA Members, the American Standards Association gives here a list of the standards received during the past month by the ASA Library for its classified files. With the increasing amount of material being received it has been decided to eliminate from the monthly list a few of those standards which may not be so important to ASA Members, such as Federal Specifications for foods. The list below therefore, includes only those standards which the American Standards Association believes will be of greatest interest to Members in connection with their war production.

The standards listed may be consulted by ASA Members at the ASA Library, or copies may be obtained from the organization issuing the standard. Addresses of these organizations are given for your convenience.

Associations and Technical Societies

American Iron and Steel Institute (350 Fifth Avenue, New York, N. Y.)

Carbon Steel Sheets Steel Products Manual, Section 11 June, 1942 25¢

Institute of Radio Engineers, Inc. (330 West 42nd Street, New York, N. Y.)

Radio Wave Propagation, Measuring Methods Vol. 30, No. 7, Part II, 1942 50¢

Institute of Radio Engineers (cont)

Radio Wave Propagation, Definitions of Terms Vol. 30, No. 7, Part III, 1942 20¢

Facsimile, Definitions of Terms Vol. 30, No. 7, Part IV, 1942 20¢

National Electrical Manufacturers Association (155 East 44th Street, New York, N. Y.)

Service Equipment Standards Publication 42-74 April, 1942 30¢

United States Government

National Bureau of Standards (Washington, D. C.)

Optical and Mechanical Characteristics of 16-Millimeter Motion-Picture Projectors Circular C437 June 1, 1942

Radio Letter Circular LC692 May 19, 1942

Commercial Standards

List of Commercial Standards (Revised to July 1, 1942) Letter Circular LC695 (Supersedes LC691)

Approved by Industry

Cotton and Rayon Velour CS103-42

Simplified Practice Recommendations

Circulated to Industry

Glass Containers for Green Olives and Maraschino Cherries

Approved by Industry

Salt Packages R70-42

In Print (Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

Crayons, Chalks and Modeling Clays for School Use R192-42

Wire Diameters for Mineral Aggregate Production Screens R147-42

Structural Insulating Board (Vegetable Fiber) R179-42 (Supersedes R179-41)

Pipe Fittings (Gray Cast Iron, Malleable Iron, and Brass or Bronze) R185-42

Stove Pipe and Accessories R190-42

Federal Specifications Executive Committee (U. S. Treasury Department, Washington, D. C.)

Federal Specifications

(Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

The date after the title of the specification indicates when it becomes effective.

Bandages; muslin (unbleached), roller (new) DDD-B-81 November 1, 1942

Beef; fresh (Amendment 2) PP-B-221a October 15, 1942

Bearings: roller (Amendment 2) FF-B-186 October 15, 1942

Bottles: dropping (new) DD-B-576 November 1, 1942

Brushes, Dust; counter (Amendment 2) H-B-201a November 1, 1942

Compound: sweeping (Amendment 1) P-C-591a November 1, 1942

Cases; brief, leather (new) KK-G-121a October 15, 1942

Diggers; post-hole (new) GGG-D-326 November 1, 1942

Dividers (Amendment 1) GGG-D-351 October 15, 1942
Felt: hair (superseding C-F-201a) C-F-201b October 15, 1942
Filler: joint-sealing, hot-poured type (for concrete) (new) SS-F-336 October 15, 1942
Floor-Coverings: felt-backed (new) LLL-F-471 October 15, 1942
Lamp-Auxiliaries; fluorescent (new, with supplement) W-L-131 November 1, 1942
Lead: sheet (Amendment 1) QQ-L-201 November 1, 1942
Lumber and Timber: softwood (superseding MM-L-751b) MM-L-751c November 15, 1942
Mallets and Mauls: wood (Amendment 3) LLL-M-71 November 1, 1942
Millboard: asbestos (superseding HH-M-351) HH-M-351a October 15, 1942
Paint: traffic, exterior, white and yellow (new) TT-P-115 October 15, 1942
varnish-base (for concrete and wood floors) (new) TT-P-146 November 1, 1942
Potatoes: Irish (Amendment 2) HHH-P-611 October 15, 1942
Road and Paving-Materials: general specifications (methods for sampling and testing) (superseding SS-R-406) SS-R-406a October 15, 1942
Rope: Henequen and other hard-fibers (new) T-R-586 November 1, 1942
Salmon: canned (Amendment 1) PP-S-31a October 15, 1942
Scales: motor-truck, built-in, and self-contained (new) AAA-S-79 November 1, 1942
railway-track, knife-edge (superseding AAA-S-101) AAA-S-101a November 15, 1942
Soap: laundry, chip, rosin-type (new) P-S-581 December 1, 1942
laundry, granulated, rosin-type (new) P-S-583 December 1, 1942
salt-water (Amendment 1) P-S-611a December 1, 1942
Solder: brazing (Amendment 1) QQ-S-551 October 15, 1942
Squares: carpenters', die-makers', and machinists' (Amendment 1) GGG-S-656 November 15, 1942
Steel: carbon and alloy, bars (Amendment 1) QQ-S-671 October 1, 1942
Thinner: lacquer (new) TT-T-266 October 15, 1942
Tubing, Aluminum-Alloy (AL-17) (Aluminum-Copper-Magnesium-Manganese); round, seamless (superseding WW-T-786) WW-T-786a November 1, 1942
Turners: cake (new) RR-T-806 October 15, 1942
Wadding: cotton, sheet (new) CCC-W-51 November 1, 1942
Wire, Steel (Carbon): spring, hard-drawn (new) QQ-W-465 October 15, 1942
spring, music (new) QQ-W-470 October 15, 1942
spring: oil-tempered (new) QQ-W-474 October 15, 1942

Emergency Alternate Federal Specifications
(Prepared in collaboration with the War Production Board)

Aluminum-Base-Alloy: die castings (superseding E-QQ-A-591, 10/15/41) E-QQ-A-591 July 7, 1942
Baskets, Desk: steel (strip and wire) (superseding E-RR-B-131, 2/27/42) E-RR-B-131 July 23, 1942
Beds:
hospital (superseding E-AA-B-201, 7/9/42) E-AA-B-201 July 28, 1942
hospital, adjustable-spring-bottom (superseding E-AA-B-211b, 7/9/42) E-AA-B-211b July 28, 1942
Brass:
commercial and naval, castings (superseding E-QQ-B-621, 9/16/41) E-QQ-B-621 July 11, 1942
naval, bars, plates, rods, shapes, sheets and strips (superseding E-QQ-B-636, 9/16/41) E-QQ-B-636 July 28, 1942

Emergency Alternate Specifications (cont)

Bronze:
castings (superseding E-QQ-B-691a, 3/31/42) E-QQ-B-691a July 28, 1942
manganese, castings (superseding E-QQ-B-726a, 9/16/41) E-QQ-B-726a July 28, 1942
Brushes, Scrubbing: floor, hand (superseding E-H-B-541, 3/19/42) E-H-B-541 July 28, 1942
Cable (Armored and Lead-Covered-Armored) and Cord (Armored); (600 volt service and under) (superseding E-J-C-71, 7/29/41) E-J-C-71 July 18, 1942
Cable and Wire; rubber insulated, building-type (0 to 5,000-volt service) (superseding E-J-C-103, 3/31/42) E-J-C-103 July 18, 1942
Cards:
guide (card-size) (superseding E-UU-C-76, 3/26/42) E-UU-C-76 July 18, 1942
guide, calendered (file-size) E-UU-C-86 July 23, 1942
index (superseding E-UU-C-128, 3/26,/42) E-UU-C-128 July 14, 1942
Carpet; cork E-LLL-C-96 July 7, 1942
Cheesecloth: (for) wiping purposes (remnants and seconds) E-DDD-C-301 July 18, 1942
Cushion: carpet and rug, hair-felt E-C-C-811 July 23, 1942
Gloves; working, cotton, with leather-palm E-JJ-G-451 July 7, 1942
Heels: rubber (and heel bases) (superseding E-ZZ-H-141, April 4, 1942) E-ZZ-H-141 July 23, 1942
Hose:
pneumatic, braided E-ZZ-H-496 July 7, 1942
pneumatic, wrapped E-ZZ-H-499 July 7, 1942
radiator (for) motor vehicles E-ZZ-H-511 July 14, 1942
tender, corrugated, locomotive E-ZZ-H-581 July 9, 1942
water, braided (superseding E-ZZ-H-601, 4/9/42) E-ZZ-H-601 July 28, 1942
water, wrapped (superseding E-ZZ-H-611, 4/9/42) E-ZZ-H-611 July 28, 1942
Leather:
harness, black and russet (vegetable-tanned) E-KK-L-171a July 18, 1942
upholstery (superseding E-KK-L-291, 6/2/42) E-KK-L-291 July 18, 1942
Linoleum:
battleship (superseding E-LLL-L-351a, 7/7/41) E-LLL-L-351a July 7, 1942
plain, inlaid and printed E-LLL-L-361 July 7, 1942
Metal, Antifriction; castings and ingots E-QQ-M-161 July 7, 1942
Mopping Outfits (superseding E-RR-M-571, 4/1/42) E-RR-M-571 July 18, 1942
Mops; cotton (superseding E-T-M-561a, 3/6/42) E-T-M-561a July 9, 1942
Oilers and Fillers; hand (superseding E-RR-O-376, 3/14/42) E-RR-O-376 July 7, 1942
Pads; desk (superseding E-UU-P-16, 2/27/42) E-UU-P-16 July 7, 1942
Paint; ready-mixed, international-orange (superseding E-TT-P-59, 2/24/42) E-TT-P-59 July 23, 1942
Paper:
index E-UU-P-258a July 14, 1942
Kraft, wrapping, waterproofed E-UU-P-271 July 14, 1942
Pencils; lead (superseding E-SS-P-166, 1/22/42) E-SS-P-166 July 28, 1942
Pipe-Fittings:
brass or bronze (threaded or brazed), 125-pound (superseding E-WW-P-448a, 11/29/41) E-WW-P-448a July 11, 1942
brass or bronze (threaded), 250-pound (superseding E-WW-P-461a, 11/29/41) E-WW-P-461a July 11, 1942
cast-iron, drainage (superseding E-WW-P-491, 11/29/41) E-WW-P-491 July 11, 1942

Emergency Alternate Specifications (cont)

Pipe Fittings (cont)

cast-iron, (threaded) (superseding E-WW-P-501a, 11/29/41) E-WW-P-501a July 11, 1942
malleable-iron (threaded), 150 pounds (superseding E-WW-P-521a, 11/29/41) E-WW-P-521a July 11, 1942

Plaster; adhesive, surgical E-U-P-401 July 9, 1942
Plumbing Fixtures; (for) land use E-WW-P-541a July 9, 1942
Receptacles, Waste-Paper:
fibre, office and lobby E-LLL-R-191a July 28, 1942
metal, office and lobby (superseding E-RR-R-191, 4/8/42) E-RR-R-191 July 18, 1942
Scissors and Shears (superseding E-GGG-S-101b, 10/9/41) E-GGG-S-101b July 7, 1942
Sheeting; rubber (superseding E-ZZ-S-311a, 5/29/42) E-ZZ-S-311a July 28, 1942
Tape; cotton, bleached, dyed or grey, general use E-DDD-T-86 July 28, 1942
Tile; cork E-LLL-T-431 July 7, 1942
Twine:
flax E-T-T-891 July 23, 1942

Twine (cont)

hemp E-T-T-901a July 23, 1942
jute E-T-T-911 July 28, 1942

Agricultural Marketing Administration (U. S. Department of Agriculture, Washington, D. C.)

Strawberries
Frozen Asparagus
Canned Fruits for Salad
Processed Raisins
The Classification of Linters
Frozen Corn
Frozen Peas
Damaged or Repaired Packages of Fresh Fruits and Vegetables

U. S. Army and Navy

Monthly Report on changes in U. S. Army Specifications, Federal Specifications, Commercial Standards, Simplified Practice Recommendations compiled by the Standards Branch, Resources Division, Headquarters, Services of Supply, July 1942

New ASTM Emergency Specifications on Copper, Cement, and Rubber Sheath Compound

The American Society for Testing Materials has announced three new emergency specifications:

Emergency Specifications for Rubber Sheath Compound for Electrical Insulated Cords and Cables Where Extreme Abrasion Resistance Is Not Required (ES-6)

Emergency Alternate Specifications for Portland Cement (EA-C150)

Emergency Specifications for Fire-Refined Copper Other Than Lake (ES-7)

The emergency specification for Rubber Sheath Compound was developed by Committee D-11 on Rubber Products, chiefly in the interest of conservation. The physical requirements for the vulcanized rubber sheath call for a minimum tensile strength of 1800 psi; elongation at rupture of 350 minimum; set in 2-in. gage length, 3/8 in. maximum; and a tensile strength after 48 hours in oxygen bomb test of 1400 min. psi.

The emergency specifications for fire-refined copper other than lake were developed in ASTM Committee B-2 on Non-Ferrous Metals and Alloys in recognition of the desirability of standardizing the requirements for this type of copper, considerable tonnage of which has been imported by the U. S. Metal Reserves. This emergency grade of fire-refined copper (known as "Braden" in the trade) is intended for alloying in wrought alloys when specifically approved in the applicable ASTM product specifications. This grade is also intended for use in rolling into sheets and shapes for mechanical purposes; it is not intended for electrical purposes.

The emergency alternate portland cement specifications cover three types: I, II, and III, corresponding to the same types in the existing standard C150. The low heat of hydration, Type IV, and high sulfate resistance, Type V, are not covered in the emergency requirements. A number of points of interest are covered in the specifications providing for the addition of TDA in types I and II in amounts not exceeding 0.045 per cent by weight of the cement and in Type III in amounts not exceeding 0.08 per cent, and vinsol resin may be added to Type I.

Copies of these new specifications can be obtained from ASTM headquarters, 260 S. Broad Street, Philadelphia, at 25 cents each.

Plant Efficiency

Small and medium-sized manufacturing plants —and employees thereof—take notice! The Division of Information of the War Production Board have recently issued a booklet, *Plant Efficiency*, whose primary purpose is to help war plants do a bigger, better, and faster job of producing in 1942.

This booklet presents such vital subjects as good lighting, cutting down accidents, maintenance and repair, and a table giving data on proper speeds and feeds for SAE steels. It tells how to get the most out of machine tools, how to meet Government standards, how to train workers quickly, how to keep track of orders, production and materials. It also has a section on plant protection, on swing shifts, and on how to pool facilities.

Charts and diagrams illustrate the methods described throughout.

Copies of the booklet, *Plant Efficiency*, may be obtained from the Division of Information, War Production Board, Washington, D. C.

WPB and OPA Orders Are Based on Standards

Within the past two months the War Production Board and the Office of Price Administration have issued the following Orders which require compliance with existing standard specifications, include standards in the Order itself, or provide for simplification schedules.

War Production Board

Aircraft Control and Pulley Bearings (Limitation Order L-145)—After June 9 a producer of bearings may not accept any purchase order for sizes listed in this order, unless he is designated as an "authorized producer" of the size ordered. "By concentrating manufacture of specified sizes, larger runs of such sizes can be made by producers, effecting a considerable saving in time formerly spent in setting up and taking down production machinery." the WPB announces.

Baby Carriages (Limitation Order L-152)—Reduces types from approximately 20 to two or three models per manufacturer. WPB estimates a saving of 11,000 tons of iron and steel—80 per cent of annual consumption by industry. The order is expected to release light presses for war material production.

Bicycles and Parts (Limitation L-52)—Reduces the types of bicycles from 20 to two models per manufacturer. Savings expected amount to one-half of the annual steel consumption, 7½ ounces of rubber per unit produced, and large savings in copper and copper alloy, nickel, tin, cadmium, chrome, etc.

Canned Fruits and Vegetables (Supplementary Order No. M-86-a, amended June 27, 1942)—Grades of canned fruits and vegetables, and sizes of cans, to be set aside by canners and packers for the use of Government agencies, are listed. Specifications for boxes in which the cans are to be packed are included, covering weatherproof solid fiber boxes, wirebound wood boxes, and nailed wooden boxes.

Chromium and Nickel in Automotive Valves (Limitation Order L-128)—Specifies the percentage of chromium or nickel to be used in exhaust valves for passenger cars and light motor trucks, and medium and heavy motor trucks. Specifies that exhaust valves must be of the two-piece, welded head type and no chromium and nickel shall be used in the manufacture of the stem.

Containers and Closures, Glass, Distilled Spirits (Limitation Order L-103), Schedule A—Sets specifications for standard containers, and restricts designs during limitation periods.

Schedule B—The purpose of this Order is the same as Schedule A. The principal value of these schedules is the release of productive capacity necessary for manufacture of glass containers as substitutes for containers using critical materials, the WPB announces.

Containers, Tin (Limitation Order M-81)—Restricts use of tinplate and terneplate to manufacture of specified container sizes.

Cotton Textile Fabrics and Rayon Textile Fabrics Entering into the Manufacture of Flags (General Preference Order M-166)—Specifies the use of cotton mercerized bunting manufactured in accordance with Federal Specifications CCC-B-791a; and defines other types of material "suitable for flags" as of certain width and weight. Restricts manufacture of flags to the type of material provided in the order. Does not apply, however, to flags ordered by the Army, Navy, and other war agencies, or departments of the Federal Government purchasing national flags or Union Jacks according to Federal Specifications. Certain foreign countries are also listed as exempt from the restrictions.

Dental Equipment and Supplies (Limitation Order L-139)—Provides for issuance of Simplification Schedules.

Dental Excavating Burs (Schedule I to Limitation Order L-139)—Reduces number of bur sizes from 75 to 24, representing an elimination of 68 per cent, permitting manufacturers to concentrate on production of the few essential types and to meet the increased needs of the armed forces, the WPB announces.

Douglas Fir Plywood (Moisture-Resistant Type) (Limitation Order No. L-150)—Defines the sizes and types of standard panels, wallboard, sheathing, and plywood for concrete form panels, and for automobile and industrial use, which may be manufactured or delivered after July 1. "It is expected that the simplification practices ordered will result in a reduction of sizes from about 4300 to approximately 300," the WPB announces, but the sizes permitted are expected to satisfy all normal consumer demands, including war requirements, officials estimate. It is expected to increase production of the most critical type of plywood by 20 million feet per month; and to

relieve an acute shortage in the low-grade plywood used in war construction.

Drinking Water Coolers, Self-Contained (Schedule I to Limitation Order L-126)—Types, sizes, and capacities are specified for the type of drinking water coolers ordinarily found in restaurants, industrial establishments, offices, schools, etc. The Order limits production to eight different sizes for the electric type and three for the ice-cooling variety. In the past there have been 40 to 50 different types and sizes of electrically operated and 25 to 30 different types and sizes of ice coolers available. Federal Specifications are being patterned after those listed in the schedule, the WPB announces. The order is expected to save 366,000 lb of brass and copper during the balance of 1942.

Schedule II to Limitation Order L-126—Reduces types and models of condensing units by 59 per cent; and varieties of basic compressor bodies by 25 per cent. Estimated saving, on the basis of 1941 production, is 1400 tons of iron and steel.

Feminine Apparel for Outer Wear and Certain Other Garments (Limitation Order L-85 as Amended)—Lists maximum measurements for length, sweep, and hem for all size ranges for women's garments, including dresses, evening gowns, skirts and culottes, slacks, ski and snow pants. Sizes for misses' and girls' garments are also given. The effect of Order L-85, WPB estimates, will be savings of 100,000,000 yards of wool, rayon, cotton, and linen cloth, and some 15 to 20 per cent more garments from the same amount of material. WPB also expects to prevent radical changes in styles of garments, thus avoiding obsolescence of existing garments.

Fire Protective Equipment (General Limitation Order L-39, as amended July 11, 1942)—Permits use of scarce materials for carbon dioxide extinguishers manufactured in accordance with specifications of the United States Army, Navy, Maritime Commission, or War Shipping Administration, provided such carbon dioxide extinguishers are delivered to fill purchase orders bearing a preference rating of A-1-j or higher.

Hair Pins (Limitation Order L-104) Issued April 25, 1942—Limits length and gage of the round wire from which hair pins are drawn. Eliminates completely the production of "bobby" pins. Limits production of hair pins to 50 per cent of 1941 production. Estimated savings amount to 75 per cent of steel used in 1941, the elimination of "bobby" pins saving some 4,000 tons of steel.

Hand Tools Simplification (Limitation Order L-157)—Authorizes the Director General of Operations to issue schedules establishing simplified practices with respect to types, sizes, forms, specifications, or other qualifications for any hand tools.

Hand Shovels, Spades, Scoops, and Telegraph Spoons (Schedule I to Limitation Order L-157)—Lists sizes and grades permitted for different types of shovels, etc. Grade A tools are equipped with grade XX or SA handles; B-grade tools with grade X or SC handles. Grades SA, SB, and SC are defined in Simplified Practice Recommendation R76, Ash Handles, issued by the United States Department of Commerce, National Bureau of Standards, and are approximately equivalent to XX, X, and No. 1 grade designations commonly used by the shovel industry.

Heat-Resistant Chromium of Chromium-Nickel Alloy Iron and Alloy Steel (Supplementary Order M-21-g)—Sets up maximum specifications for heat-resistant alloys used in metallurgical furnaces, oil refineries, synthetic rubber plants, cement mill furnaces, and power plant equipment. The new specifications are designed to use the least possible amount of alloying materials necessary to maintain the effectiveness of the equipment involved. The order does not apply to heat-resistant steels for the armed services where specifications call for more nickel and chromium than the schedules set up in the order.

Industrial Power Trucks (Limitation Order L-112)—Issued July 10, 1942. Restricts production to catalog listed models only until August 15, after which "Approved standard model" schedules will be issued. The form of the General Order is similar to that of L-103 on Glass Containers providing for issuance of simplification schedules.

Machine Tool Electrical Specifications (Limitation Order L-147)—Limits production of electrical controls, motors, wiring, or other electrical devices or features used in the electrification of machine tools to those which meet the requirements of the American War Standard—Machine Tool Electrical Standards—C74-1942, approved by the American Standards Association. Also provides that methods of application of electrical control, motors, wiring, or other electrical device to a machine tool shall meet the requirements of the American War Standard. WPB estimates there should be a production increase of 10 to 15 per cent through application of the order.

Mahogany and Philippine Mahogany (General Conservation Order No. M-122) (Interpretation No. 1)—Provides that 1/28 inch veneers which do not meet the requirements of aircraft construction as defined in specification AN-NN-P-11a, issued jointly by the Army and Navy, shall not be subject to the restrictions of Conservation Order M-122, and may be sold freely in the usual channels of distribution.

Paper, Simplification and Standardization of (Limitation Order L-120)—This order gives the Director of Industry Operations authority to prescribe simplified and standardized practices and specifications for the "manufacture, put up, and manufacturer's packaging of paper, with particular respect to grades, weights, sizes, colors, coatings, finish, furnish, markings, minimum manufacturing quantities, quantity of sheets per unit, size and shape of roll or pack, and any other detail or condition of manufacture, put up, or manufacturer's packaging." The program is carried out through a series of orders which were drafted after numerous conferences with industry representatives. The five schedules already adopted reduce the number of grades from 82 to 52, WPB reports, and reduces items by approximately 80 per cent. Savings in labor, power, transportation facilities, and repair and maintenance materials can be made under the specifications, the WPB declares. The Pulp and Paper Branch predicted that its specifications for the types of paper covered by the order will result in savings of approximately 227,000 tons of pulp fibre on the basis of 1941 production. Grades and weights seldom in demand will be eliminated, although the orders have been drafted with care in order not to eliminate any of the grades of paper, sizes, or colors most generally demanded or required by industry or government, it is explained.

Book Papers Used in Commercial and Advertising Fields (Schedule I to Limitation Order No. L-120)—Limits production by each manufacturer to not more than two grades of a selected list of sizes of English Finish Book Papers, in a limited number of colors. The Order specifies that there must be at least 15 per cent ash content in basis weights of 45 and over, but there is no minimum in basis weights lighter than 45. The same type of limitation applies also to uncoated book papers supercalendered; eggshell (antique) book papers; plain or uncoated offset book papers; process (machine) coated book papers; coated one side book papers (not more than one body stock permitted although there may be two qualities of coating); glossy coated two sides book papers; dull coated book papers; coated two sides offset papers (not more than one grade permitted to any one manufacturer); plain coated cover paper (not more than one grade permitted any one manufacturer). Each manufacturer must notify the WPB which grades of paper he selects for manufacture.

Book Papers Used in Book Publishing Field (Schedule II to Limitation Order No. L-120)—Provisions of this order, similar to those described above, cover English (machine) finish book papers; uncoated book papers, supercalendered; eggshell book papers; antique bulking book papers; plain or uncoated offset book papers; and glossy coated two sides book papers.

Paper, Chemical Wood Pulp Tablet (Schedule IV to Limitation Order No. L-120)—One grade of this type of paper may be selected by a manufacturer for future production. The furnish of the paper shall include sufficient non-fibrous material to produce in the finished paper a percentage of ash content, by weight, of at least 5 per cent in substance weight 16 and at least 7 per cent in substance weight 20.

Envelope Paper, White Wove (Excluding Extra Strong Sulphate), (Schedule V to Limitation Order L-120)—Each manufacturer of this type of paper shall select one grade for future production and may not produce any other grade after the effective date of this schedule. After the effective date no manufacturer shall produce this type of paper except to fill a special making order; in the grade selected for manufacture; in white (unless the total quantity of the order is at least 20,000 pounds); and in substance weights 20, 24, and 28 only. Sufficient non-fibrous material must be included in the furnish to produce in the finished paper a percentage of ash content, by weight, or at least 7 per cent.

Rubber, and Products and Materials of which Rubber Is a Component (Amendment 8 to Supplementary Order M-15-b-1)—Specifies compounds and constructions which must be used for insulated wire and cable to fill all orders, including War Orders and orders placed by any department or agency of the United States Government. Certain exceptions are listed, among them submarine cable designed for communications, light, and power; oil and gas well logging cable; military field communication wire, searchlight, and fire control cable, and Radar Detector Cable; cord and cable designed for naval shipboard use, aviation use, or for use on guns or other weapons; and rubber compound tape designed for splicing and terminal use with these products. Any other type of insulated wire and cable may be excepted also provided the purchase order is accompanied by a certificate signed by a contracting or inspecting official of the Army, Navy, Maritime Commission, or other governmental agency certifying that the use of the compounds specified by the purchase order is necessary for direct military or naval use.

ASTM methods of test and performance requirements are listed as determining the performance required. Three compound grades are specified for insulation: Grade W-A, with a maximum of 55 per cent of crude rubber by volume, and total RHC[1] of 65; Grade W-B, with maximum

[1] RHC is the total rubber hydrocarbon, defined as the sum total of the crude rubber and the rubber value of the reclaimed rubber expressed on a volume basis.

of 35 per cent by volume of crude rubber, total RHC 50; and Grade W-C, crude rubber 13, total RHC 55. ASTM D 353-1941 determines the performance of W-A insulation. ASTM EA D-353 and ASTM EA-D-574 are specified for the performance of W-B insulation. W-C insulation is to be National Electrical Code grade as specified in emergency alternate specification of February 11, 1942. Jackets are W-D compound grade, with maximum per cent by volume of crude rubber 50 per cent; total RHC 75 per cent; performance according to ASTM EA-D-532.

Type of service and operating voltage for which each grade of insulation is suitable are listed in a table, with specifications for outer coverings.

No insulated wire with heavier walls than those "provided by American Standards Association's standard"[2] and required by the rating of the equipment serviced, except for non-leaded submarine cable, shall be manufactured or specified.

Amendment 9 to Supplementary Order M-15-b-1—Revises specifications for belting, hose, packing, dam and lock gate seals, and other equipment using rubber such as loom pickers, milking machine equipment, pipe coupling rings, press die pads, printing rubber products, drums and rubber protected industrial equipment, abrasive implements, and mine and industry safety parts. Maximum per cent by volume of crude rubber and total rubber hydrocarbon is specified for each grade of rubber compound and synthetic rubber compound listed. Conveyor cover compound, pulley cover compound, friction compound, average tensile range and average friction range in pounds, and combined cover gage maximum in inches are given for No. 1 and No. 2 grades of conveyor belting. Uses for which each of the grades may be used are listed.

Hose furnished to these specifications shall be inspected and tested in accordance with the latest revision of ASTM Method of Test D-380. Specifications for fire hose and mill hose are identical with Federal Emergency Alternate Specification E-ZZ-H-451a.

Amendment 10 to Supplementary Order M-15-b-1—Provides that all rubber footwear shall be manufactured in black color only, and shall be confined to certain types of arctics and rubbers. The average weight of crude rubber per pair is specified.

Amendment 11 to Supplementary Order M-15-b-1—Provides specifications for the manufacture of soles and heels made of rubber, except conductive soles and heels. In addition the compound grade total rubber hydrocarbon and abrasive index to specifications provide maximum and minimum hardness. Federal Specifications EA-ZZ-H-141 and ZZ-R-601 are applicable to these specifications.

Sitka Spruce Logs (General Preference Order M-186)—Defines Sitka spruce logs as Grade No. 1 and Grade No. 2 logs of the botanical species of Picea sitchensis and logs which meet the specifications of Grade No. 1 and Grade No. 2 logs of that species, produced in those parts of Oregon and Washington lying west of the crest of the Cascade Mountain range or in Alaska. Grades are to be determined by the standards prevailing on August 1, 1941, in the several producing districts in Washington and Oregon listed in the order. The order freezes all Sitka spruce logs of grades 1 and 2 and cants and flitches of these logs in the hands of their owners as of July 20. Anyone, other than an aircraft manufacturer, desiring to receive any of the restricted logs, cants, and flitches after July 20 must file an application on Form PD-593.

Softwood Lumber (Limiting Order L-121)—This order limits the supply of Southern pine, Douglas fir or Western larch sold as meeting specifications of 1200, 1400 or 1600 lb fiber stress per square inch, or 1000, 1100 or 1200 lb compression stress, to Class 1 or Class 2 orders.

Restriction is also placed on Southern pine, Douglas fir, West Coast hemlock, noble fir or Sitka spruce, of grades No. 1, No. 2 or any higher common grade (not including clears, selects, finish, shop or factory, and not including D or better flooring, ceiling, drop siding or partition in Southern pine) except for Class 1, Class 2 or Class 3 orders.

The order further limits Idaho white pine, Northern white pine, Eastern white pine, Norway pine, Ponderosa pine, sugar pine, Lodgepole pine, Jack pine, white fir, tamarack, Eastern spruce, Engelmann spruce or Western white spruce, of Grades No. 2 or No. 3 common, except on Class 1, Class 2 or Class 3 orders.

Office of Price Administration

Apparel (Maximum Price Regulation 208) Staple Work Clothing—Provides for "simplified models" of men's and boys' work clothing by eliminating such details as triple stitching, double thickness pockets, cuff buttons, etc. A simplified model is considered the same as the garment before simplification for the purpose of pricing, unless the elimination of details makes it the same as a lower-priced garment sold by the dealer during March, 1942.

Beef and Veal Carcasses and Wholesale Cuts (Maximum Price Regulation 169)—Establishes maximum prices for beef and veal carcasses and wholesale cuts, and provides that no person "in the course of trade or business" shall buy or receive any beef or veal carcass or wholesale cut

[2] American Standard, Class AO 30 Per Cent Rubber Insulation for Wire and Cable for General Purposes (C8.17-1936), 20 cents.

unless each such carcass or cut has been identified by grade. Uniform grades are established as: choice, good, commercial, utility, and cutter, and canner. In determining the grade of each such carcass or cut, the seller shall use the "Specifications for Official United States Standards for Grades of Carcass Beef," except that the two grades, cutter and canner, shall be combined and treated as a single grade, and the specifications for the two grades, prime and choice, shall be combined and treated as a single grade, choice. Grade letters are assigned to each grade: Choice AA; Good A. Commercial B; Utility C.

Bicycles and Bicycle Equipment (Maximum Price Regulation No. 158)—Sets maximum prices for War Bicycles. The "War" bicycle is a model not previously manufactured and will be produced by the bicycle industry following the specifications outlined in the War Production Board's General Limitation Order L-52 and in an agreement between the Office of Price Administration and individual bicycle manufacturers.

Fabricated Concrete Reinforcing Bars (Maximum Price Regulation 159)—Defines "concrete reinforcing bars" as including all plain and deformed bars specified in the Division of Simplified Practice Recommendation R26-30, and all plain round rods or wire specified in the Division of Simplified Practice Recommendation R53-32. Lists extra sizes and quantities and special prices which may be charged for them. Provides an additional 5 cents per cwt for a tensile range for structural or Intermediate Grade "more restricted than the ASTM specification, and in no case shall the deduction be more than 5,000 lb per square inch." Provides 10 cents extra per cwt for a weight tolerance more restrictive "than the ASTM specification of latest adoption, but in no case restricted to less than 2½ per cent over or under for lot shipments."

New-Formula Condensed Soups Packed Under WPB Conservation Order M-81 (Maximum Price Regulation No. 181)—Provides price ceilings for condensed soups packed under the WPB order, which requires the minimum can size to be No. 1 picnic size or larger with a minimum of 11 ounces (larger than previous minimum can sizes). The WPB order also contains requirements for the minimum amount of dry solid concentrations in each can of condensed soup. "Thus," declares the OPA release, "the housewife will obtain considerably more food value per ounce than she did from a can of soup made before June 30, 1942, when the new WPB specifications became mandatory."

Copper Scrap and Copper Alloy Scrap (Amendment 1 to Revised Price Schedule 20, as amended)—Reduces maximum prices for 13 classifications of copper-alloy scrap. Many grades, it is explained, were already selling below ceiling prices. Another change provides for purchase of lots of between 5,000 and 40,000 pounds of No. 2 Copper Wire and Mixed Heavy Copper, Light Copper, High-grade Bronze solids, and High Lead Bronze solids without the necessity for chemical analysis of the material. Also, it is provided that if the copper content of Light Copper is less than 90 per cent but not less than 85 per cent, the maximum price shall be a price determined in accord with the formula for pricing Refinery Brass. Specifications for each grade and type of material covered in the Schedule are included.

Textile Fabrics: Cotton, Wool, Silk, Synthetics and Admixtures (Amendment 6 to Maximum Price Regulation 118), Cotton Products—Provides minimum specifications for various types of finished corduroy for men's wear. Prices for towels, wash cloths, pot holders, and other household cloths, are also given. Classes and types of blankets, specifying weight and type of construction, are set up as a basis for determining prices.

Cotton Products (Amendment 7 to Maximum Price Regulation 118)—Provides a ceiling price for huck towels conforming to Federal Specification DDD-T-531, effective July 18, 1942.

Glass and Glass Containers (Maximum Price Regulation 175). Rough Rolled, Figured, Wire and Heat Absorbing Rolled Glass—Thicknesses and sizes of different types of glassware and maximum prices for these standard items are listed.

Hides, Kips and Calfskins (Amendment 1 to Revised Price Schedule 9)—Packer classifications of hides which fail to meet established standards of trim, tare allowance or delivery are to be sold at a price at least 1 cent per pound less than maximum prices allowed for the standard items.

Appalachian Hardwood Lumber (Maximum Price Regulation 146)—Establishes maximum prices for Appalachian hardwood lumber which is sold on standard or near-standard grades. Sale of special grades or items is prohibited until the producing mill files with the Office of Price Administration a description of the grades and items and a statement of the prices received for them around October 1, 1941.

Amendment 3 to Maximum Price Regulation 146—Gives thickness, widths, and lengths for each special grade or item, with its grade designation.

Rotary Cut Southern Hardwood Box Lumber (Maximum Price Regulation 176)—Specifies grading rules for this type of lumber.

Southern Pine Lumber (Maximum Price Regulation 19)—Specifies grades and establishes specific maximum prices for almost every item of longleaf yellow pine lumber, including timber, used extensively in ship-building and other important military items. For grades and classes of lumber recognized by the Southern Pine Association

Standard Specifications for southern pine lumber, July 1, 1939, but for which specific maximum prices are not provided, a formula is set up by which the seller can determine the price. A similar formula applies to the Southern Pine Association's Gulf Coast Classification.

Specifications for car material correspond to specifications issued by the Association of American Railroads, M907-33.

Southern Hardwood Lumber (Maximum Price Regulation 97)—A new price regulation replacing Revised Price Schedule No. 97. Grade terms used have the meaning set forth in the "Rules for the Measurement and Inspection of Hardwood Lumber" issued by the National Hardwood Lumber Association, effective January 1, 1942. Lumber sold in accordance with the grades designated shall be deemed to include lumber in:

(1) Grade rule range widths and lengths;

(2) Widths and lengths substantially the same as grade-rule range widths and lengths; or

(3) Specified average widths or specified average lengths which are substantially run-of-the-log.

Provides that no seller shall sell Southern hardwood lumber in "recurring special" grades or items unless he has filed a description of these grades or items with the Office of Price Administration, and these descriptions have been included in a Maximum Price Regulation by the OPA.

Prohibits "unreasonably refusing to ship lumber on standard grades and in grade-rule range widths and lengths," "falsely or wrongly grading or invoicing lumber," "grading as a special grade lumber which normally is graded by the seller as a standard grade."

Central Hardwood Lumber (Maximum Price Regulation 155)—Provides maximum prices for North Central and South Central Hardwood Lumber in standard or near standard grades and for lumber sold in "recurring special" grades and "nonrecurring special" grades. A "recurring special" grade is one for which no price is specifically listed in the regulation but to which reference was made in the published price lists or unsolicited trade quotations of the producing mill at any time during the years 1941 and 1942. Unless otherwise specified, grade terms used have the meaning set forth in the "Rules for the Measurement and Inspection of Hardwood Lumber" issued by the National Hardwood Lumber Association, effective January 1, 1942.

Paper (Amendment 4 to Maximum Price Regulation 129)—Applies the provisions of the Regulation to several items which were inadvertently omitted from the original regulation, such as waxed paper, envelopes, paper cups and containers, sanitary closures and milk bottle caps, drinking straws, technical papers, gummed papers, tags, standard grocer's and variety bags, and certain other wrapping papers. Provides that No. 1 Kraft Wrapping Paper includes any wrapping paper 18 lb basis weight or over, containing 100 per cent unbleached sulphate fibre and testing 90 per cent to 96 per cent of the basis weight Mullen Test under Standard TAPPI testing procedure. All rolls or bundles of sheets must be stencilled or labeled with a designation including the words, "No. 1 Kraft."

Standard Newsprint Paper (Amendment No. 2 to Maximum Price Regulation 130)—This amendment establishes a differential of not more than $3.50 per ton for "Super Standard" Newsprint when such paper is marked as being sold for rotogravure printing. Maximum Price Regulation 130 defined "Standard" Newsprint paper so as to include "Super Standard" Newsprint and established the same maximum price for both grades, with the idea that a less expensive paper could be substituted for the higher grade. "Super Standard" newsprint is used by newspaper publishers for pictorial sections, printed magazine and book sections, largely for Sunday supplements. Evidence collected by the OPA shows, however, it reports, that printed results when using Standard Newsprint in rotogravure printing are blotchy in appearance and obscure as to detail; and the rougher and more abrasive surface of Standard Newsprint results in excessive wear and scratch marks on the copper cylinder from which the ink is transmitted to the paper, thus lessening the service life of these copper surfaces.

A specific differential rather than the customary differential of each particular manufacturer, as in the case of colors, sheets, and so forth, is established for "Super Standard" quality, OPA explains, because in the case of these latter differentials the differences in equipment and methods of production are so great as to make it difficult to establish equitable differentials for them. This is not the case with Super Standard quality, the OPA states.

Kraft Wrapping Papers and Certain Kraft Bag Papers (Maximum Price Regulation 182)—Specifies weights of standard grades on which prices are based.

Pine Oil (Maximum Price Regulation 179)—Gives minimum specifications for basic pine oil, alpha terpineol, synthetic pine oil, synthetic alpha terpineol, and light gravity pine oil. Refers to ASTM distillation range in each case. For the purpose of conversion from gallons to pounds, the regulation defines a gallon as weighing 7.8 pounds.

Douglas Fir Plywood (Maximum Price Regulation 13)—This new price regulation, which replaces an earlier regulation of the same number, contains the same ceiling prices as those in the former regulation for the grades of plywood which may be manufactured under the provisions of

War Production Board Limitation Order L-150. It does not include prices for grades and sizes which have been prohibited by the WPB Limitation Order. Among the grades prohibited are "Good 1 Side" and "Good 2 Sides." A new grade of plywood "Sound 1 Side" was set up by the WPB Limitation Order, and this grade is included. Provision is made for computing prices for special grades and sizes which are produced in accordance with "military orders."

Rayon Yarn and Staple Fiber (Maximum Price Regulation 167)—Turns per inch and denier are shown for the different types of rayon yarns for which prices are established. All delivered weights are based on Standard 11 per cent moisture regain.

Used Household Mechanical Refrigerators (Maximum Price Regulation 139)—Defines "reconditioned" and "unreconditioned" refrigerators as to condition and service to be expected, and outlines the basis on which prices are to be determined.

Iron and Steel Scrap (Amendment 6 to Revised Price Schedule 4)—Adds four new grades of steel scrap to the schedule, and makes a number of changes in the specifications of grades already listed.

Scrap Rubber (Revised Price Schedule 87, as Amended)—Defines the grade or quality of each kind of scrap rubber, and lists maximum prices for the highest grade or quality of each kind of scrap rubber defined.

Bar or Package Soaps or Cleansers (Commodity Practices Regulation 1)—This is the first OPA regulation dealing exclusively with size and quality of a commodity. It sets the types of soap now being sold in different parts of the country as minimum standards for the manufacturers. All forms of household soaps are covered—toilet, laundry, flake, chip and granule—and no reduction in the size of cake or package, or deterioration in the quality, or "serviceability" can be made.

Pig Tin (Amendment 2 to Revised Price Schedule 17)—Provides for Grade F, which is to be 99.80 per cent or higher percentage of purity, meeting specifications set forth in the "Specifications and Proposals for Supplies, No. S-14," issued December 15, 1939, by the U. S. Treasury Department, Procurement Division, except that pig tin of this grade need not be free of scrap and remelted metal, and may contain over 0.05 per cent lead. This is provided that such tin is sold under allocation by the War Production Board for uses where the excessive lead content has no deleterious effect.

Sale and Rental of Used Typewriters (Maximum Price Regulation 162)—Defines standards of reconditioning and rebuilding "in order to assure the best possible workmanship on machines, which in the immediate future cannot be replaced, and which ultimately may be used by the various departments of the armed forces and other war effort organizations."

Western Wooden Agricultural Containers (Maximum Price Regulation 186)—Provides specifications for different types of boxes used for packing fruits and vegetables and other agricultural products.

AREA Streamlines Procedure on Emergency Measures

The American Railway Engineering Association, in cooperation with some of the departments of the Association of American Railroads, modified its procedure recently in order to speed the revision of standards during the war emergency.

Acting for the Board of Direction of the AREA is a permanent ratifying committee to permit modifications of standards and specifications without awaiting formal confirmation by the AREA at its annual meetings. The members of this committee are H. R. Clarke (chairman), F. R. Layng, E. M. Hastings, and A. R. Wilson. Four emergency technical committees under this group have been set up, covering Roadway and Track, Structural Problems, Water Supply and Water Treatment, and Ties and Wood Preservation. To these four emergency committees the many standing committees of the Association will present recommendations.

As one part of the WPB project on National Emergency Steel Specifications, railroad technical groups have been participating actively in the work of the Technical Advisory Committee on Rail and Track Accessories. Part of the recommendations of this committee provide for the use of either AREA or ASTM specifications for rail and track materials. It is further expected that these specifications will be binding both to the railroads and their suppliers in the war emergency.

New WPB Container Section Will Coordinate Standards

A new section on containers has been set up in the Division of Purchases of the WPB by Houlder Hudgins, acting director. The new Container Section will coordinate container and packaging standards and establish uniform specifications for containers and packaging materials of all kinds.

New Foreign Standards Now in ASA Library

THE following new and revised standards, just received by the American Standards Association, may be borrowed by ASA Members, or ordered through the ASA Library.

Canada

CESA Standard Specification for Pole Line Hardware C83-1942

Great Britain

Test Code for Coke Ovens BS 999-1942
Sanitary or Disinfectant Powders BS 1013-1942
Pigments for Colouring Cement Magnesium Oxychloride and Concrete BS 1014-1942
Methods for the Analysis and Testing of Coal and Coke BS 1016-1942
Methods for the Sampling of Coal and Coke BS 1017-1942 (BS 1016 and 1017 supersede BS Nos. 404-1930, 420-1931, 453-1932, 496-1933, 502-1933, 568-1934, 686-1936, 687-1936, 804-1938)
The Use of Timber in Building Construction (Floors of Ordinary Board and Joist Construction) BS 1018-Part 1-1942

Revised British Standard

Quality Control Charts by B. P. Dudding, M.B.E., Ph.D., and W. J. Jennett, B.Sc. (Eng.) BS 600R-1942 (Partly superseding BS 600-1935)

Amendments to British Standards

Ordinary Portland and Rapid-hardening Portland Cement CF (CEB) 9915 (Amendment to BS 12-1940)
Telegraph Material (Insulators, Pole Fittings, etc.) CF (EL) 9689 (Amendment to BS 16-1937)
Portland-blastfurnace Cement not exceeding 65% Blastfurnace Slag CF (CEB) 9916 (Amendment to BS 146-1941)
Electric Overhead Traveling Cranes (Power Driven in all Motions) CF (ME) 9707 (Amendment to BS 466-1932)
Ferrous Pipes and Piping Installations for and in connection with Land Boilers CG (ME) 10 (Amendment to BS 806-1942)
Pure Vacuum Salt for Dairy Purposes CG (C) 80 (Amendment to BS 998-1941)

British War Emergency Standards

Schedule of Sizes of Composite Containers for British Packers in the United Kingdom for the Home Trade BS 1012-1942
Concrete Road Slabs BS 1020-1942
Copper Alloy Ingots and Castings BS 1021 to 1028-1942 (1 Vol.)
Priming Paint (Lead Base) for the Protection of Steel Sheet BS 1033-1942

Amendments to British War Emergency Standards

Locomotive, Carriage and Wagon Axles (This slip amplifies CF (ME) 9022 dated Dec. 1941) CF (ME) 9756 (Amendment to BS 24—Part 1-1941)
Locomotive, Carriage and Wagon Tires (This slip supersedes CF (ME) 8755 dated January, 1942 and CF (ME) 6926 dated November, 1940) CF (ME) 9757 (Amendment to BS 24—Part 2-1942)
Steel Conduits and Fittings for Electrical Wiring CF (EL) 9846 (Amendment to BS 31-1940)
Tramway Axles CF (ME) 9755 (Amendment to BS 102-1930)
Reversible Protected-type Two-pin Plugs and Sockets with Earthing Connections CG (EL) 368 (Amendment to BS 196-1930)
Material for Colliery Tub Draw-bars, Shackles and Couplings CF (CR) 9643; CF (CR) 9722 (Amendments to BS 291-1927)
"High Carbon" Steel Cylinders for "Permanent" Gases CF (CH) 9662 (Amendment to BS 399-1930)
"Low Carbon" Steel Cylinders for the Transport and Storage of "Permanent" Gases CF (CH) 9662 (Amendment to BS 400-1931)
Steel Cylinders for the Storage and Transport of "Liquifiable" Gases CF (CH) 9662 (Amendment to BS 401-1931)
Manila Ropes for General Purposes CG (ME) 154 (Amendment to BS 431-1940)
Lead and Lead Alloys for Cable Sheathing CG (NF) 152 (Amendment to BS 801-1938)
Solid Rolled Steel Railway Wheels and Disc Wheel Centres (Superseding slips CF (ME) 6008 dated May, 1940 and CF (ME) 6927 dated November, 1940) CF (ME) 9754 (Amendment to BS 468-1932)
Chemical Lead (Types A & B) CG (C) 349 (Amendment to BS 334-1934)

Revised British War Emergency Standards

Soft Solders Grades C, D, G, M and N (including Memorandum, May, 1942) BS 219-1942 (Superseding BS 219-1932)

BS Board of Trade Specifications

Women's Blouses BS/BOT 3-1942
Women's Boots and Shoes (Low & Medium Grades) BS/BOT 6-1942
Schedule of Japanned Hollow-Ware (Supplement of BS/BOT 11-1942) BS/BOT 14-1942

BS Air-Raid Precaution Specifications

Anti-Scatter Fabric BS/ARP 45

BS and BWES Drafts

Coal Tar Pitch for Roofing Felt CG (B) 329 (Superseding CF (B) 9949)
Sockets for Wire Ropes for General Engineering Purposes (Revision of BS 463) CG (ME) 602
Retailers Counter Check Books CG (PAC) 649

New Foundrymen's Safety Code

A valuable Code of Recommended Practices for the Protection of Life, Property, and Production in the Foundry Industry During the War is being published in installments in *The Foundry*. The series started with the May, 1942 issue, and has already received the approval of the Office of Civilian Defense.

The complete Code, in multigraph form, may be purchased through the American Foundrymen's Association, 222 West Adams Street, Chicago, Ill., at $1.50.

Labor Office Plans Safety For Workers in Post-War Industry

PLANS for international cooperation to protect the post-war worker from industrial accidents and health hazards are already under way in the International Labor Office. Details of the program were revealed in a letter received last month by Cyril Ainsworth, assistant secretary of the American Standards Association, who is one of the four American representatives on the ILO Correspondence Committee on Accident Prevention.

The work is being started immediately, for two reasons, the International Labor Office explains. First, the stimulus given by the war to industrial development in a large number of countries outside Europe has given the problem of industrial safety a new importance in such countries. This makes it highly desirable that there should be approved international safety standards which can be the basis for new national regulations. Second, the large-scale destruction of industrial plant and equipment which is taking place in the war zone will necessitate equally large-scale building programs. If international health and safety standards can be formulated before these rebuilding programs are put into effect it will increase the effectiveness and efficiency of the new building, the ILO believes.

To carry out this program a Draft Model Safety Code for Factories will be prepared similar to the Model Safety Code for the Building Industry which was adopted by the International Labor Conference in 1937. A preliminary draft of the proposed new Code is being prepared by Swen Kjaer, formerly chief of the Industrial Accidents Division, U. S. Department of Labor. Mr. Kjaer for many years has been an active member of the Safety Code Correlating Committee of the American Standards Association, and has been an alternate on the ASA Standards Council representing the U. S. Department of Labor.

Preliminary material is being collected from members of the ILO Correspondence Committee on Accident Prevention, and it is expected that work on the actual drafting of the code will be started soon. All of the American Safety Standards have been made available to Mr. Kjaer and the International Labor Office for use in this project. Drafts of standards and new standards as they are completed will also be made available. In addition to safety provisions for work in factories, it is planned that the code will also cover equipment and its installation, lighting, heating, and ventilation.

The International Labor Office, formerly located in Geneva, Switzerland, now has headquarters in Montreal, Canada.

War Specifications Continue Steel in Safety Shoes

The Wartime Prices and Trade Board of Canada has recently issued an order regulating styles, colors, and finishes of all leather footwear. Elimination of "frills" is the essential purpose of the new order, and towards this end women's shoes will be limited to seven colors, men's dress footwear to five colors, and men's work boots to two. Leather slippers are curtailed to six shades, and babies' soft-soles to four. It is expected that substantial savings in leather and metal will result.

Steel will be permitted only in arch-support and safety shoes, while metal hooks, buckles and trimmings are prohibited.

In this connection it may be interesting to note that an ASA committee working on safety standards recently recommended that steel continue to be used in the manufacture of safety shoes. No other known type of construction affords satisfactory protection, the committee pointed out. This ASA War Standard Committee is making a study of safety shoes at the request of the War Production Board in order to make recommendations for conservation of materials through an American War Standard, if possible.

Directory of Emergency Alternate Federal Specifications

In an effort to aid in the conservation of strategic war materials, the Consumer Standards Section, of the U. S. Department of Agriculture, at the request of the Specifications Branch, Conservation Division, War Production Board, is making a comparative analysis of emergency alternate Federal specifications. To facilitate such an analysis, a *Directory of Emergency Alternate Federal Specifications*, issued from April 29, 1941 to June 10, 1942, has been compiled. This Directory classifies all the specifications issued during this period into the same commodity groups established for Federal Specifications. It also furnishes ready reference in

numerical order of issuance, and gives the symbol and date of issuance or revision, and contains a comprehensive index by specific commodities.

Copies of the comparative analysis of the various specification groups may be obtained by writing to C. L. Warwick, Chief, Specifications Branch, Conservation Division, War Production Board, Washington, D. C.

Builders' Hardware Manual Used for Government Building

Maximum specifications for builders' hardware, such as locks, door closers, knobs, hinges, and brackets, to be installed in construction projects of the Army and Navy, Maritime Commission, the Reconstruction Finance Corporation, Public Buildings Administration, and National Housing Agency, are given in a *Builders' Hardware Manual* just issued by the Division of Industry Operations, War Production Board. The *Manual* is made effective through a WPB memorandum which directs that priorities issued for construction of war housing and for other Government building costing more than $50,000 are to be limited to materials included in the *Manual*. It is also provided in Directive No. 5, issued by the War Production Board, that the Army, Navy, and Maritime Commission shall consider the *Manual* as providing maximum equipment in all construction projects for which contracts are placed after October 15. The Reconstruction Finance Corporation, Public Buildings Administration, and National Housing Agency, shall consider the *Manual* as providing maximum equipment on contracts placed after August 15.

The specifications includued in the *Manual* have been selected to include those not in violation of any existing Regulations, Restrictions, or Orders.

Inquiries concerning the *Builders' Hardware Manual*, Directive No. 5, and the WPB Memorandum should be addressed to the Hardware and Small Tools Section, Building Materials Branch, 416 Fifth Street, N.W., Washington, D. C. Inquiries should be marked "Ref. Builders Hardware Manual."

SAE-ASTM Committee Recommends Specifications for Synthetic Rubber

Synthetic rubbers have progressed to the specifications stage, according to the *Journal of the Society of Automotive Engineers*, June. Standard specifications for automotive and aeronautical synthetic rubbers recommended by Subcommittee V on Synthetic Rubber Specifications of the Committee on Automotive Rubber (Society of Automotive Engineers-American Society for Testing Materials) are presented in that issue.

ASA Standards Activities

Standards Available Since Our July Issue

Fire Tests of Building Construction and Materials (ASTM C19-41) American Standard A2.1-1942 25¢

Fire Tests of Door Assemblies (ASTM C152-41) American Standard A2.2-1942 25¢

Forged or Rolled Steel Pipe Flanges for General Service (ASTM A181-37) American Standard G46.1-1942 25¢

Gas-Burning Equipment in Power Boilers, Requirements for Installation American Standard Z21.33-1942 50¢

Gas Valves, Listing Requirements (Revision of Z21.15-1934) American Standard Z21.15-1942 50¢

Malleable Iron

Malleable Iron Castings, Specifications (ASTM A47-33) American Standard G48.1-1942 25¢

Cupola Malleable Iron, Specifications (ASTM A197-39) American Standard G49.1-1942 25¢

Refrigerators Using Gas Fuel, Approval Requirements (Revision of Z21.19-1936) American Standard Z21.19-1942 $1.00

Textile Testing Machines, Specifications (ASTM D76-41) American Standard L15.1-1942 25¢

Wool Felt, Methods of Testing (ASTM D461-40) American Standard L16.1-1942 25¢

Wrought-Iron and Wrought-Steel Pipe and Tubing

Electric-Resistance-Welded Steel Boiler and Superheater Tubes for High-Pressure Service (ASTM A226-40) American Standard B36.18-1942 25¢

Standards Available (cont)

Wrought-Iron and Wrought-Steel Pipe and Tubing (cont)

Electric-Resistance-Welded Steel and Open Hearth Iron Boiler Tubes (ASTM A178-40) American Standard B36.13-1942 25¢

Lap-Welded and Seamless Steel and Lap-Welded Boiler Tubes (ASTM A83-40) American Standard B36.12-1942 25¢

Medium-Carbon Seamless Steel Boiler and Superheater Tubes (ASTM A210-40) American Standard B36.15-1942 25¢

Seamless Alloy-Steel Boiler and Super-heater Tubes (ASTM A213-40) American Standard B36.17-1942 25¢

Seamless Steel Boiler Tubes for High-Pressure Service (ASTM A192-40) American Standard B36.14-1942 25¢

Spiral-Welded Steel or Iron Pipe (ASTM A211-40) American Standard B36.16-1942 25¢

Standards Approved Since Our July Issue

Fire Tests of Building Construction and Materials (ASTM C19-41) Revision of A2-1934 American Standard A2-1942

Fire Tests of Door Assemblies (ASTM C152-41) American Standard A2.2-1942

Standards Approved Since July (cont)

Photography
- Distance Scales Marked in Feet American Standard Z38.4.3-1942
- Double Plate Holders (Moulding Type) American Standard Z38.1.Q-1942
- Focal Lengths of Lenses, Marking American Standard Z38.4.4-1942
- Photographic Paper Roll Leaders and Limit Signals American Standard Z38.1.M-1942
- Shutter Cable Release Tips and Sockets with Straight Threads American Standard Z38.4.6-1942
- Shutter Cable Release Tips and Sockets with Tapered Threads American Standard Z38.4.5-1942
- Tripod Connections for American Cameras American Standard Z38.4.1-1942
- Tripod Connections for European Cameras with Adapter for American Tripods American Standard Z-38.4.2-1942

Standards Being Considered by ASA for Approval

Cast-Iron Pipe Flanges and Flanged Fittings, Class 250 (Revision of B16b-1928)
Coal Mines, Rock Dusting to Prevent Coal Dust Explosion (Reaffirmation of M13-1925)
Code for Pressure Piping (Revision of B31.1-1935)
Cold-Rolled Strip Steel (ASTM A109-38) G47
Colored Textiles, Fastness L14
Cranes, Derricks, and Hoists, Safety Code B30
Electrical Insulating Materials
- Laminated Round Rods Used in Electrical Insulation (ASTM D349-39) C59.15
- Laminated Tubes Used in Electrical Insulation (ASTM D348-39) C59.14
- Sheet Plate Materials Used in Electrical Insulation (ASTM C229-39) C59.13

Gas Floor Furnaces (CS99-42)
Identification Markings of Compressed Gas Cylinders, Proposed Standardization
Keyways for Holes in Gears B6.4
Lime
- Limestone, Quicklime, and Hydrated Lime, Methods of Chemical Analysis of (ASTM C25-29)
- Quicklime for Structural Purposes, Specifications for (ASTM C5-26)

Metal-Cleaning Sanitation, Code of Recommended Good Practices
Pipe Threads (Revision of B2-1919)
Power-Operated Radio Receiving Appliances (UL 6th ed) (Revision of C65-1938)
Protection of Structures Containing Inflammable Liquids and Gases—Part 3 of Code for Protection Against Lightning (From status as American Tentative Standard to American Standard) C5, Part 3
Rotating Electrical Machinery on Railway Locomotives and Rail Cars and Trolley, Gasoline-Electric and Oil-Electric Coaches (Revision of C35-1936) C35
Weather-Resistant (Weatherproof) Wire and Cable, URC Type (Revision of C8.18-1936)

Standards Submitted for Consideration Since Our July Issue

Gas Burning Appliances
- Domestic Gas Ranges Revision of Z21.1-1940
- Gas Space Heaters Revision of Z21.11-1940
- Gas-Fired Duct Furnaces Revision of Z21.34

Gypsum
- Gypsum Lath (ASTM C37-40) Revision of A67.1-1941
- Gypsum Wall Board (ASTM C36-34) Revision of A69.1-1941
- Gypsum Sheathing Board (ASTM C79-34) Revision of A68.1-1941
- Test for Gypsum and Gypsum Products (ASTM C26-40) Revision of A70.1-1941

Standards Submitted Since July (cont)

Petroleum Products and Lubricants
- Test for Carbon Residue of Petroleum Products (Ramsbottom Carbon Residue) (ASTM D524-42)
- Test for Flash Point by Means of the Pensky-Martens Closed Tester (ASTM D93-40) Revision of Z11.7-1940
- Test for Gum Content of Gasoline (ASTM D381-36) Revision of Z11.36-1936
- Test for Melting Point of Paraffin Wax (ASTM D87-37) Revision of Z11.4-1937
- Test for Tetraethyl Lead in Gasoline (ASTM D526-42)
- Test for Vapor Pressure of Petroleum Products (Reid Method) (ASTM D323-41) Revision of Z11.44-1941

Radio
- Recommended Practices for Loudspeaker Testing C16.4
- Recommended Practices for Volume Measurement of Electrical Speech and Program Waves C16.5

Sampling & Analysis of Coal & Coke Revision of K18-1940
Steel for Bridges and Buildings (ASTM A7-39) Revision of American Standard G24-1939
Structural Steel for Locomotives and Cars (ASTM A113-39) Revision of American Standard G39.1-1942
Transformers
- Guides for Operation of Transformers C57.3
- Test Code for Transformers, Regulators and Reactors C57.2
- Transformers, Regulators and Reactors C57.1

American War Standards

Standard Approved Since Our July Issue

Manganese, Allowable Concentration of Z37.6-1942 20¢

Standards Approved and Published

Accuracy of Engine Lathes B5.16-1941 25¢
Allowable Concentration of Cadmium Z37.5-1941 20¢
Color, Specification and Description of Z44-1942 25¢
Domestic Gas Ranges, Approval Requirements Z21.1ES-1942 $1.00
Gas Water Heaters, Approval Requirements Z21.10WS-1942 $1.00
Machine Tool Electrical Standards C74-1942 40¢
Photographic Exposure Computer Z38.2.2-1942 $1.00
Quality Control
- Guide for Quality Control Z1.1-1941
- Control Chart Method of Analyzing Data Z1.2-1941

(In one Volume 75¢)
- Control Chart Method of Controlling Quality During Production Z1.3-1942 75¢

Standards Under Way

Allowable Concentration of Ether Z37
Allowable Concentration of Xylene Z37
Allowable Concentration of Xylol Z37
Color Fastness of Textiles, Terminology L14
Electrical Measuring Instruments
General Industrial Equipment Instruments
Military Radio Equipment and Parts C75
Packages for Electronic Tubes Z45
Protective Lighting of Industrial Plants A85
Protective Occupational Footwear
Screw Threads for Alloy-Steel Bolting B1.4

New Projects Approved

Pressure-Temperature Ratings for Steel Pipe Flanges and Flanged Fittings B16e5

New Project Requested

Class 125 Cast-Iron Flanged Fittings B16a

A New

American War Standard

Allowable Concentration of Manganese (Z37.6-1942) . . . . . 20¢

This sets a threshold limit for the presence of manganese dust or fumes for the purpose of protecting the health of industrial workers.

A whole series of industrial health standards needed in war production is being developed in this way.

Employers, employees, government groups, insurance companies, and safety organizations are all pooling their experience and knowledge in the development of these standards to protect the health of war workers.

Other Standards for Protection against Dusts and Gases

- Fundamentals Relating to the Design and Operation of Exhaust Systems (Z9) (preliminary edition) ..... 40¢
- American Standard for Safety in Electroplating Operations (Z9.1-1941) ..... 30¢
- American Standard Allowable Concentration of Carbon Monoxide (Z37.1-1941) ..... 20¢
- American Standard Allowable Concentration of Hydrogen Sulfide (Z37.2-1941) ..... 20¢
- American Standard Allowable Concentration of Carbon Disulfide (Z37.3-1941) ..... 20¢
- American Standard Allowable Concentration of Benzene (Z37.4-1941) ..... 20¢
- American Standard for Grinding, Polishing and Buffing Equipment Sanitation (Z43-1941) ..... 60¢
- American Defense Emergency Standard for Allowable Concentration of Cadmium (Z37.5-1941) ..... 20¢

For complete list of safety and industrial hygiene standards write:

American Standards Association

29 West 39th St. New York